

# **Technology Plan 2011-2014**

Prepared by John Wahl with the Juneau School  
District Technology Committee

**2010-2011**

**Board of Education**

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**Mission Statement:**

*In Juneau we are all partners in providing each student with the skills, knowledge, and attitudes to be a contributing citizen in a changing world.*

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# Introduction

The Juneau School District envision staff and students using technology to seek new knowledge, solve problems, and collaborate within a global society. The ubiquitous and transparent use of technology by staff and students supports the mission of the District, which includes helping students achieve the Alaska standards in all content areas in a way which respects the special needs and talents of each individual and enables each person to develop the skills needed in the 21st century.

Technology plays an important role in everyone's life today, and it is a dynamic industry that is in constant change. Therefore, it is critical that our educational system develops technology literacy and 21st Century literacy for all our students, enabling them to be a global citizen in a diverse digital environment.

Each school year, interested stakeholders in the Juneau Community gather together in both physical and virtual settings to develop a vision, long-range plan, goals and objectives to utilize technology to help support the instructional program in our schools, as well as enriching and extending the learning opportunities we offer our students. The following stakeholders have committed to contents of this plan:

## 2010-2011 Stakeholders

<b>Glenn Gelbrich</b>	Superintendent
<b>Laury Scandling</b>	Assistant Superintendent
<b>David Means</b>	Director of Administrative Services
<b>John Wahl</b>	Instructional Technology Coordinator
<b>Phil Gouveia</b>	Information Technology Supervisor
<b>Tom Milliron</b>	Principal: Floyd Dryden Middle School
<b>Phil Loseby</b>	Assessment Coordinator
<b>Ray Imel</b>	Middle School Technology Teacher
<b>Sheryl Wittig</b>	Elementary Librarian/Music Teacher
<b>Jay Wyatt</b>	<i>PowerSchool</i> Support Staff
<b>Mark Carver</b>	Webmaster and IT Support Staff
<b>Administrative Council:</b>	
<b>Dave Newton</b>	Director of Student Services
<b>Patty Newman</b>	Director of Curriculum, Assessment, and Instruction
<b>Carin Smolin</b>	Career and Technical Education Coordinator
<b>Kristin Bartlett</b>	Communications Manager
<b>Barb Mecum</b>	Special Projects Coordinator
<b>Ted Wilson</b>	Principal: Glacier Valley Elementary
<b>Dave Stoltenburg</b>	Principal: Harborview Elementary
<b>Jim Hicks</b>	Principal: Mendenhall River Community School
<b>Margie Hamburger</b>	Administrative Specialist: Juneau Community Charter School

**Administrative Council: (Continued)**

<b>Molly Yerkes</b>	Principal: Dzantik'i Heeni Middle School
<b>Gary Campbell</b>	Assistant Principal: Dzantik'i Heeni Middle School
<b>Sarah Marino</b>	Principal: Yaakoosge Daakahidi High School
<b>Ryan Alsup</b>	Principal: Juneau Douglas High School
<b>Paula Casperson</b>	Assistant Principal: Juneau Douglas High School
<b>Dale Staley</b>	Assistant Principal: Juneau Douglas High School
<b>Dan Larson</b>	Principal: Thunder Mountain High School
<b>Rhonda Hickok</b>	Assistant Principal: Thunder Mountain High School
<b>Kathryn Milliron</b>	Assistant Principal: Thunder Mountain High School

**Public Commentary, Input, Feedback:**

<b>Sarah Day</b>	Community Member (Juneau Empire)
<b>Don Williams</b>	Community Member (Greens Creek)
<b>Kathy Blanc</b>	Community Member (Parent)

**Student Input:**

<b>Jack Garrard</b>	Student Focus Group
<b>Abram Leigh</b>	Student Focus Group
<b>Alex Soboleff</b>	Student Focus Group
<b>Keegan Brown</b>	Student Focus Group

The stakeholders who are a part of the Juneau School District Technology Committee and interested parties will hold a special working meeting every January to evaluate and review the Juneau Borough School District Technology Plan.

## **Vision Statement**

The Juneau School District envisions staff and students using technology to seek new knowledge, to solve problems, and to collaborate within a global society. The ubiquitous and transparent use of technology by staff and students supports the mission of the District, which includes helping students achieve the Alaska and World Class standards in all content areas in a way which respects the special needs and talents of each individual and enables each person to develop the skills needed in the 21st century. Technology will be used to enrich the educational experience, enhance communication and foster meaningful connections between school and work for students, teachers, administrators, parents and community members.

## **Current Situation and Needs**

A significant amount of technology is in use across the Juneau School District. Students have more access to computers than many fellow Alaskan schools, and significantly more than other K-12 students nation wide. The school district has 3,278 computers utilized by administrators, teachers, students, and support staff. The ratio of students per computer is as follows: District average 2.69, JSD Elementary average 4.57, JSD Middle School average 3.25, JSD High School average 2.08.

Beyond the ratio of computers to students, it is clear that the district is trailing behind the needs of today's modern workplace. Outside of school, students enjoy proficiency in technology which businesses are quickly realizing will define the workplace of tomorrow: social networking, online community, asynchronous collaboration. Yet, the most widely used examples of these tools are not integrated into Juneau's classrooms or are blocked by the district's Internet access policy. The Juneau School District needs to provide a framework and capacity for online collaboration within the confines of its existing Internet access policy.

Efforts to upgrade classroom and infrastructure technology and practice are affected by budget and organizational challenges. Due to budget constraints for the 2011-12 School Year, the Instructional Technology Coordinator position will be cut, and the duties of coordinated vision, planning, implementation, staff development, and evaluation will fall under the duties of the Assistant Superintendent. Additionally, the role of individual site technicians will be consolidated and centralized under the role of the Information Technology Supervisor. Currently there are six centralized information technology support staff with 10 individual site technicians. The new model will have a total of 12 centralized technology support staff for the entire district under the direction of the IT supervisor.

Furthermore, due to a reduced budget, the Juneau School District has limited capacity for systemic, long-term educational technology planning. The majority of new technology funding comes from school renovation funds which are not recurring and don't allow the district to replace technology on a regular cycle. Other funding sources, including grants, pay for particular items and are limited in scope. Some purchases are made in isolation and aren't always aligned to the strategic vision.

Pending an effort to replace obsolete computers throughout the Juneau School District, a Board of Education 2011 Capital Funds Needs request for (xxxxxx) has been submitted for consideration by the legislative delegation. Additionally, two sites (Gastineau Elementary and Auke Bay Elementary) have been approved by the community for renovations. These sites will utilize their furnitures, fixtures, and equipment (FF&E) funds to address their technology infrastructure and hardware/software needs. However, the Juneau School District Technology Committee recommends the Budget Working Committee create an action plan that comprehensively address a refresh cycle. During the first few years of this action plan, budget amounts will vary based on the age of hardware assets in the inventory, but eventually, a fixed amount per year should be agreed upon and designated in the General Operating Fund.

The Juneau School District serves nearly 5000 students throughout seventeen locations including three high schools, two middle schools, six elementary schools, one elementary charter, one correspondence program, one K-8 Montessori program, and three classrooms in youth group homes. Each site employs a unique model for integration from one-to-one laptops for a part or whole of the student population, dedicated technology labs for specific functions or general technology integration, mobile labs, pods of computers in classrooms, general use computers in libraries, assistive technologies, and mobile devices. In 2010, the Juneau School District

Technology Standards Ad Hoc Committee identified a digital projector and a document camera integrated with a teacher computer (ideally a laptop) as a baseline for the minimum technology tools with which every classroom should be equipped.

An online student information system, PowerSchool, is in use to keep track of student achievement, attendance issues, and general student information. At the secondary level, the student information system includes a parent and student portal whereby information can be monitored for attendance, assignments, assessment history, grades, and notifications. PowerSchool also integrates with the lunch program allowing parents to track balances and receive updates. Parents and students can sign up for an e-mail notification related to District topics, school-wide events, and other related announcements. At the elementary level, parents and students can monitor grade history, assessment history, and attendance.

To satisfy current communications needs, and to begin the process of integrating modern web technologies (aka "Web 2.0") into the classroom, the district has implemented a modern web services infrastructure. Instead of a collection of discrete, hard-to-maintain static web pages; a dynamic, network-integrated, database driven web services platform that allows for the publishing of various types of content by various users has allowed the district proper control over dissemination and online community. The district has implemented a content management system for its district-wide website and is in the process of changing site-based websites over to the same system. The content management system (CMS) has afforded the following benefits:

- Staff no longer need to be trained to use complicated software like Contribute or Dreamweaver, just to navigate and edit content on the website itself;
- Saved money on staff training and software licenses;
- Content and layout are separated, allowing regular users to work with content, and the web-programmer to work with layout;
- A single webmaster role has been strengthened by a distributed group of content managers and various other groups with security permissions to edit or view only defined areas;
- Staff update individual pieces of content, not entire pages, which removes the risk of broken pages and inconsistent formatting;
- Content is stored in a database, not static HTML files, and thus is portable and can be accessed from other database-linked programs (FileMaker, Excel, Powerschool, Alio);
- Content can be moderated before it gets published to the world;
- Content can be automatically published/unpublished by predefined date/times;
- Has laid the framework for deploying Web 2.0 technologies to the classrooms like wikis, blogs and micro blogs, online collaboration, electronic surveys, interactive knowledge base, social networking, instant message, and multimedia streaming;
- Helps establish a place to compile district- or school-wide knowledge base;
- Gives teachers and students a place to begin building online community.

The Juneau School District has chosen Drupal's CMS for the following reasons:

- Extensible, industry standard platform (PHP/SQL);



- No software license fees;
- Numerous "#1 Open Source CMS" awards;
- Large developer community;
- Large collection of freely-available modules (calendar, wiki, blog, profile, etc);
- Large collection of freely-available graphical themes;
- Excellent codebase and overall implementation design.

As a result of this new website infrastructure, the Juneau School District has been able to improve communication to teachers, students, parents, and the community with timely information about:

- District-wide events
- District-wide contact information
- Parent feedback from the McDowell Survey
- School status updates related to inclement weather
- Important messages related to the budget, School Board Meetings, press releases, job announcements, and the Superintendent
- Digital resources available to staff, students, and parents
- the 5-year Strategic Plan with regular updates on the progress of each initiative

The website also allows users to subscribe to RSS feeds related to content that is updated regularly such as news feeds, the strategic plan, and announcements.

To meet the goals of this plan, the JSD Technology Team pledges to establish district-wide standards for hardware, software, and building infrastructure. The team will continue to meet annually during the school year to establish and revise these standards and monitor progress and will include a schedule of maintenance and upgrade. The outline for those standards is as follows:

## **Network Services**

### **Servers**

- Provide adequate support staff for specific server software/hardware maintenance
- Provide a coordinated, adequate server backup system and policies, including off-site storage
- Establish secure access and login policies/procedures;
- Provide secure off-site server access;
- Maintain robust hardware with a minimum configuration

### **Faxes/Copiers/Scanner/Printers**

- This plan promotes a migration to an all-in-one networked solution when possible

### **Work Stations**

- Workstations need to be adequate for designated purposes and meet district goals for security and efficacy.

#### WAPs (Wireless Access Points)

- Wireless access points need to be pervasive, with 24x7 fully integrated access, meeting district goals for security and efficacy.

### **Building Infrastructure Strategies**

In advance of the finalization of any construction or renovation plans, the JSD Technology Support Team in coordination with the JSD Maintenance and Facilities Planner will develop standards for the following systems:

#### Electrical

- Provide adequate electrical outlets and circuits for new network and other technology infrastructure whenever possible during renovation building upgrades
- Provide for potential growth (laptop support) and movement of computer labs especially for new buildings and through renovations.

#### Network cabling

- Determine which sites need additional network drops for wired and wireless access
- Work with the Facilities Planner to develop district wide policies for building network infrastructure wiring that incorporates fiber optics as the backbone standard for new building and as part of renovation projects
- Require that contractors adhere to IEEE network cabling standards (length and appropriate type)

#### Ethernet switches (wire and wireless)

- Eliminate all repeaters and replace with adequate wiring or Ethernet switches
- Ethernet switches must meet industry standards
- Bring all switches up to a minimum 10/100/1000BaseT
- Provide for consistency of manufacturer/vendor across the district.
- Purchase switches that are capable of POE (power over Ethernet) whenever applicable.

#### Routers

- Apply standardization to all routers (Cisco or equivalent); and
- Assure that the district meets continuing access needs (intra/internet).

#### Firewalls

- Firewalls must meet industry standards
- Are adequate to protect student and staff by use of content filtering and anti-spam/virus protection.

#### Internet access point and devices

- Establish security for internet access points.

#### Uninterruptible Power Supply

- Provide UPS devices wherever applicable for all communication closets components;
- Determine a battery replacement schedule and upgrades of UPS units
- Assure that UPS standard up time is varied by application.

#### Climate control

- The Juneau School District Maintenance Department will assure that new technology infrastructure is wired separately from energy conservation controls.
- In addition, climate control is adequate for protection of equipment

#### Physical access to secured area

- The Juneau School District Maintenance Department and administration will assure that all communication closets have established policies for access and security.

#### Miscellaneous

- Standards and policies established for network devices should apply to any other miscellaneous technologies as much as possible. There are other groups of building infrastructure devices, for example: Outside Access Security (Doors), reader boards, and other miscellaneous technologies, which interface with the JSD network.

### **Progress Update**

The following are initiatives in progress or completed as a result of our Technology Needs Assessment performed by SERRC during the 2008-09 school year.

- Gigabit Port Upgrade Initiative: Riverbend and Floyd Dryden are not completed.  
\$105,600 were requested for FY12 to complete the project.
- Completed District-wide inventory of computer assets.
- Installed UPS in the Marie Drake Data Center
- Centralized computer purchasing for the District
- Provisioned and deployed 20Mb Internet access replacing 13 residential quality cable modems.
- Deployed an online Work Order ticket system to track and quantify IT work requests
- Reclassified a Computer Technician position to a Server Technician in line with the SERRC Report's Organizational Recommendations
- Started work on a replacement schedule for the District's computer assets
- Wireless infrastructures were designed and deployed at JDHS, Harborview, Floyd Dryden, Dzantik'i Heeni and Glacier Valley
- Replaced the District's static HTML based website with an open source Content Management System (CMS)

- Moving District services to Virtual Machines is underway
- A centralized backup system was purchased and deployed

The following are initiatives to be completed during the cycle of this three-year technology plan within the Information Technology Division.

- Move to Microsoft's Active Directory to manage all computers and users in the District;
- Consolidate six of the ten existing Site Computer Technicians into a unified support system;
- Provision the renovations of Gastineau and Auke Bay with VOIP, wireless and network connectivity;
- Migrate to Google Apps for Education for e-mail, calendaring, collaboration, documents, and other services for staff and students;

## **Teacher, Student, and Community Feedback**

A survey distributed to staff members during the 2010-2011 school year identified the following barriers to the acquisition or usage of technology: *(Full copy available in Appendix D)*

- Lack of time in the schedule for learning/using technology
- Lack of money to purchase new technologies
- Inadequate hardware to incorporate the technology integration desired by the instructor
- Lack of training/professional development
- Lack of technical support when the tools do not work as they should
- Inadequate software to incorporate the technology integration desired by the instructor

A student focus group and general survey identified the following as benefits of increased access to technology in the Juneau Borough School District:

- Provides a medium to becoming a self-learner
- Sometimes it's easier to create school projects
- Users can create sophisticated products
- Users can produce a better quality product
- Most students feel more organized using a computer for their work
- Users have access to more information

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- Provides a medium to becoming a self-learner
- Sometimes it's easier to create school projects
- Users can create sophisticated products
- Users can produce a better quality product

- Most students feel more organized using a computer for their work
- Users have access to more information

The student focus group identified the following as improvements they would like to see in accessing technology in the Juneau Borough School District:

- Access to some blocked applications that would allow users to learn computer programing and application development
- Access to legitimate educational websites that are blocked due to managing bandwidth
- Timely updates to software applications and upgrades to newer versions when available

The student focus group identified the following as a barrier in the usage of technology:

- Teachers limiting the use of technology in the class; i.e. what software will and won't be used.

In the forum and opportunity for public comment/feedback on some of the goals of the JSD Technology Plan, the following themes came up:

- Technology should be used in all classes
- Students need to learn how to write content for some of the emerging digital media (websites, blogs, Twitter, and other media)
- Staff training is imperative in successful implementations
- Instructor buy in is important to the success of the program
- Technology is an engaging tool for students and they should have access to it for such projects as: research, digital storytelling, multi-media, movies, wiki's, and other Web 2.0 technologies
- All staff needs to be shown how to use it in the classroom and in their teaching
- There are a lot of free resources available to teachers that can enhance teaching and learning such as: Kahn Academy, Free Rice, Prezi, Wordle, Google Apps, wikispaces, Glogster, Google Earth, Teachers Domain, Discovery Education,
- Teachers and students should be proficient in word processing and spreadsheets at the absolute minimum
- Increase access to mobile devices at Middle School and Elementary School levels.

The above feedback was taken into account and incorporated into the goals, objectives, and action steps of this technology plan where appropriate.

## (A) Goals, Standards, and Strategies

### Academic Achievement & Technology Literacy Goals

**Element:** *The district will set specific and measurable goals, aligned with state academic content and performance standards, for using advanced technology to improve student academic achievement.*

**Acceptable Criteria:** *Goals address specific state content and performance standards across several areas, not only educational technology. Goals are clear and measurable and targeted at student achievement in content areas.*

The Juneau Borough School District will continue to set specific measurable goals, aligned with state academic content and performance standards for using advanced technology to improve student academic achievement. This will include developing strategies for improving academic achievement and technology literacy for all students. We will continue to update our strategies for using information technology and telecommunication to improve education and or library services.

Measurements of achievement are listed as action steps/indicators under each goal below.

## Curricular and Instructional

### Strategic Plan

In an effort to raise student achievement across a number of content areas and meet the goals outlined above, the Juneau Borough School District has adopted the following [Strategic Plan for 2010-2014](#). Each strategy is linked to the JSD Website where progress updates of goals and actions can be found:

#### ***Student Achievement***

1. Align grade level core standards in math and literacy with world-class goals in mind. ([Link to the progress update](#))
2. Implement an assessment system that informs instructional practice. ([Link to the progress update](#))
3. Engage all staff in the study and use of effective instruction and intervention strategies for all students. ([Link to the progress update](#))
4. Provide support systems to implement instructional programs with fidelity. ([Link to the progress update](#))

#### ***Highly Qualified Staff***

5. Create a coordinated professional development system that is responsive to achievement data, aligns with school and district improvement efforts, and maximizes the investment of district resources. ([Link to the progress update](#))
6. Study and practice leadership behaviors that are linked to increases in student success. ([Link to the progress update](#))
7. Strengthen our human resources strategy with improved hiring, orientation, training, feedback, and evaluation processes. ([Link to the progress update](#))

#### ***Community Commitment***

8. Strengthen community partnerships to enhance relevance in career technical programs, service learning, civics education, and across the curriculum. ([Link to the progress update](#))

#### ***Culture of Service and Support***

9. Develop and implement a service culture and efficient system of support at the District Office. ([Link to the progress update](#))

### **State and Local Standards**

The Juneau School District uses the Alaska Content Standards to guide the creation of district curriculum and district core content documents. Additionally, National and International Content Standards have become a foundation for re-alignment of Juneau School District Language Arts and Mathematics standards. While a separate curriculum currently exists for Technology in the Juneau School District, since 1996, technology-related content standards have been integrated into the Mathematics, Language Arts, Science, and Health Curriculum. A complete set of the Juneau School District Curriculum Content can be found on the following Web page:

[http://www.juneauschools.org/district/instructional\\_services/curriculum](http://www.juneauschools.org/district/instructional_services/curriculum)

The following are some examples of technology integration into Math, Language Arts, Science, and Health:

- “type 25 wpm with 90% accuracy, using correct techniques” (Language Arts)
- “compare a variety of resource materials, including electronic media, to select the most useful to purpose” (Language Arts)
- “model data, by hand and by using technology, using pie charts, scatter plots, and histograms with appropriate scale” (Math)
- “record data into a spreadsheet matrix” (Math)
- “use technology to collect, summarize, analyze, interpret, and display evidence” (Science)
- “demonstrate understanding of the importance of values and consequences as well as information when making decisions about science and technology.” (Science)

- “Evaluate the impact of technology, including media, on personal, family, and community health .” (Health)
- “Apply concepts of personal online safety and cyber-security, and demonstrate awareness of the concepts of cyber-bullying, predator identification and homeland security.” (Health)
- “Apply concepts of cyber safety including privacy and the Internet, cyber relationships, intellectual property, malicious code, and social issues.” (Health)

Additionally, the Juneau School District Board of Education adopted educational goals for 2008 - 2013. These goals are listed in Appendix A.

Element: *The district will develop strategies for improving academic achievement and technology literacy of all students.*

Acceptable Criteria: *Specific strategies will be identified to improve academic achievement and technology literacy of all students. Specific strategies will be identified for assessment of technology literacy on an annual basis for at least at 8th graders.*

Technology Plan Goals:

**Goal: The current Juneau School District Technology Curriculum is revised to reflect alignment with International Society for Technology in Education National Educational Technology Standards for Students. (ISTE NETs)**

**Action Steps:**

A) The Technology Curriculum Review committee will begin the work of revising JSD Technology Curriculum during the remainder of the 2010-11 School Year with a goal for adoption during 2011-12 School Year.

B) The revised curriculum will establish 8th grade technology literacy standards and a mechanism for performance-based assessment and reporting to students, parents, the District, and the State.

**Indicators:**

1. Revised curriculum sets clear benchmarks at primary, intermediate with clear targets for 8th grade technology literacy, and is accessible to all staff, students, and parents.
2. Revised curriculum is performance based and allows for efficient reporting to interested stakeholders.



3. The revised curriculum takes advantage of Web 2.0 technologies to adapt available resources towards meeting the goals of the student performances.
4. Revised curriculum aligns with 21st Century Learning standards.
5. The 8th grade technology literacy standards provide a baseline for how technology integration can be enhanced at the high school level.

**Goal: Technology is integrated into the core Math and Literacy standards with world class goals in mind in order to raise student achievement.**

**Action Steps:**

A) Align the available JSD Technology resources and online resources to the adopted core Math and Literacy standards. Utilize the JSD Website as a “hub” for dissemination of resources.

B) Web 2.0 Technology tools will be utilized to collaborate and develop resources within the Professional Learning Communities (PLC) framework for raising student achievement in mathematics, reading, and writing.

**Indicators:**

1. Core Math and Literacy standards are available to all staff, students, and parents with appropriate links to digital instructional resources that can be utilized for whole group, small groups, and/or individuals to introduce, develop, instruct, reinforce, and/or review the standards.
2. The JSD Website and infrastructure are utilized to ensure digital resources are dynamic and that content is added/changed on an ongoing basis.

*Element: The district will develop a strategy for using information technology and telecommunication to improve education.*

*Acceptable Criteria: Description of how E-rate funds will be used to improve education through information technology and telecommunications.*

## **Communication and Information Access**

**Goal: The Juneau School District’s network services and building infrastructures will be a sufficient mechanism for planning and providing access to information from local and global sources.**

**Action Steps:**

A) The technology support team will continually assess our long-range plans and implementations for improving network connectivity.

B) The technology support team will continue to monitor and implement systems adjustments to improve the speed and capacity for Internet access.

C) The District will commit to assuring robust bandwidth access.

**Indicators:**

1. (Intermediate indicator) Surveys will show teachers are satisfied with the access, availability, and download speeds of sites that utilize streaming audio and/or video.

2. (Advanced indicator) Surveys will show all users are able to access digital resources, including streaming media, in a timely matter.

The Juneau School District will continue to utilize E-Rate funds to support telecommunications throughout the district. Currently, funds support improved Internet access services in libraries, classrooms, and computer labs as well as VOIP phone services in Central Office and some secondary education sites. VOIP phone services improves communication both internally and externally by providing direct lines, voice mail services, and Internet access to voice mail leading to more efficient communication of all necessary parties in the educational field. As additional sites change over to VOIP services, E-Rate funds will continue to support this telecommunications service.

## **(B) Technology Integration**

<b>Curricula and Teaching Strategies: Relevant Research</b>
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<p>Element: <i>The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that are based on a review of relevant research.</i></p>
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<p>Acceptable Criteria: <i>A description of our process to use research-based practices to integrate technology (includes citing the research).</i></p>
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<p>Element: <i>The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that are aligned to the Alaska State Content and Performance Standards</i></p>
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<p>Acceptable Criteria: <i>A description of our process to select appropriate Alaska State Content and Performance Standards not only the technology content standards</i></p>
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As research has shown (see Appendix B, *Understanding Multimedia Learning*), student learning is enhanced by multimedia instruction. The power and promise of technology is based on the need for technological literacy - the ability to use, manage, and understand technology. In order to ensure technological literacy, it is critical to develop technology skills and concepts at every grade level, beginning in kindergarten and continuing each year through high school.

The Technology Committee recognized the importance of adopting the Alaska Content Standards in Technology, and our current Technology Curriculum is based on those standards. The District also see the need to update our curriculum to align with ISTE's National Educational Technology Standards for Students and support technology performance indicators at each development level for our students. Teachers and administrators must be prepared to integrate technology into all educational areas and state standards in order to meet the diverse needs of students and take advantage of the expanded knowledge bases, instructional strategies and communications skills afforded by technology.

Juneau School Board Policy is explicit that during the Juneau School District curriculum review process, district committees evaluate supplementary, support, and intervention technology programs available to enhance and improve student achievement. The district also checks for alignment with Alaska Content Standards and Grade Level Expectations where applicable. The district relies on the "What Works Clearing House" Website for initial review of proposed programs and the rate of effectiveness scale to determine if further research is necessary. Programs must have positive effects or potentially positive effects in order to be implemented district wide. In cases where effects are inconsistent, further research by the committee must commence before the program can be implemented. The committee can either elect to do a pilot with a random population and compare outcomes with a control group, monitoring outcomes with pre and post assessments, district local assessments, and the State's standard based assessments. If the program shows positive effects or potentially positive effects in the district case study, the committee can make a case to implement such program on a site or district level. The decision to implement such programs will reside with site principals and/or the Juneau School District Board of Education.

In addition to the "What Works Clearing House" Website, the following resources have also been identified as valuable tools for locating research-based practices and guidance in technology integration :

- 2010 Horizon Report, <http://wp.nmc.org/horizon2010/>

The annual *Horizon Report* describes the continuing work of the New Media Consortium's Horizon Project, a qualitative research project established in 2002 that

identifies and describes emerging technologies likely to have a large impact on teaching, learning, or creative inquiry on college and university campuses within the next five years. The *2010 Horizon Report* is the seventh in the series and is produced as part of an ongoing collaboration between the New Media Consortium (NMC) and the EDUCAUSE Learning Initiative (ELI), an EDUCAUSE program.

- Apple Professional Development and trainers: applying best practices in technology integration from model schools across the nation.

- ISTE's Center for Applied Research in Educational Technology (CARET), <http://caret.iste.org/index.cfm>

CARET bridges education technology research to practice by offering research-based answers to critical questions in topics such as student learning, curriculum and instruction, and professional development.

- Guiding Documents for technology integration:
  - [ISTE National Educational Technology Standards for Students](#) (NETS\*S)
  - [Partnership for 21st Century Skills](#)
  - [21st Century Fluency Project](#)
  - [Alaska's Educational Technology Plan](#)
  - [National Educational Technology Plan](#)
  - [Revised Bloom's Taxonomy](#)

*Element: The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that will lead to improvements in student academic achievement*

*Acceptable Criteria: A description of our process to identify the measures that indicate improvements in student academic achievement.*

The Juneau School District will utilize on a wide variety of assessment tools to measure the effectiveness of technology integration programs implemented with student achievement as the goal. The assessment tools include Alaska's Standards Based Assessments for grades 3-10, fall, winter, and spring Interim MAP scores for K-10, and the developmental profile and PALS for K, 1, 2. The District will pay close attention to the effectiveness of programs especially with those struggling to meet AYP, such as Alaskan Natives, students on IEPs, English Language Learners, and economically disadvantaged. The district will not support programs that have a negative effect, potentially negative effect, or no discernible effect in student achievement.

## Special Projects

**Fast ForWord**, a computer-assisted language and learning skill program is intermittently in use at some K-12 schools in the district. Data analysis studies, conducted by the assessment coordinator and data analyst, have found this program to be quite successful in raising student achievement in reading and other content areas.

**SuccessMaker**, a computer assisted Mathematics program is currently in use at Floyd Dryden Middle School, Dzantik'i Heeni Middle School, Juneau-Douglas High School, and the Yaakoosge' Daakahidi Alternative High School. It is used as an intervention tool for students who are below grade-level standards.

**PLATO**, a web-based integrated learning system, is currently available for high school students at JDHS, TMHS, YDAHS, and Johnson Youth Center. It supports students during the school year and summer school in Mathematics, Language Arts, Science, and Social Studies. It is used as both a credit recovery aid and support for HSGQE test preparation .

**Apex Learning**, utilized at JDHS to increase Advanced Placement course offerings, provide authorized AP curriculum to classroom teachers, and ensure students are well prepared to achieve on the critical AP exams. Apex Learning courses are authorized by the College Board AP Course Audit.

**Consortium for Digital Learning** (also known as the 1 to 1 Laptop Initiative) is being fully implemented at Yaakoosge' Daakahidi Alternative High School (YDAHS), and implemented among the 9th grade smaller learning communities at Juneau-Douglas High School and Thunder Mountain High School. YDAHS was recognized as an Apple Distinguished School 2 years in a row during the 2008-9, and 2009-10 School Year. The program is funded by the Alaska Association of School Boards and the Juneau School District. YDAHS finished the grant funding period and is operating independent of the CDL as a sustainable program. This site-based program provides a laptop for every teacher and student. The program provides staff development, engineering hardware and software support. It encourages the use of multi-media applications and technology integrated student projects. It also encourages enrollment in distant education courses available online in order to meet graduation requirements and/or fulfill electives.

**Destiny**, a web-based library system implemented in the Fall of 2005, is used at all elementary, middle, and high schools. This library system enhances student and staff access to JSD libraries by using tools, which align collection resources with curriculum.

### **Career and Technical Education:**

Various teachers throughout the district integrate video projects in their classes in a variety of ways, challenging students to explore and expand thinking and as a method for communicating with parents. All media and/or technology students learn to produce movies using such software tools as iMovie, Flash, and other applications. These tools may be integrated into student presentations and projects in core content classes.

- Dzantik'i Heeni Middle School students have been using closed circuit broadcasting for 16 years and students produce movies as part of project-based learning units in core content and exploratory classes.
- Floyd Dryden Middle School students utilize a closed circuit cable system, broadcasting daily morning announcements that they produce, film, edit, and anchor. In addition, they do the same for "Special Reports" that are broadcast on Channel 6.
- Juneau-Douglas High School also is partnering with KTOO and KATH to involve students in radio and television broadcasting. JDHS Video Club has utilized students to broadcast several sporting events such as the Region V Basketball Tournament and the Annual Gold Medal Basketball Tournament with the use of their on-site television broadcasting studio.
- Juneau-Douglas High School Engineering Lab includes Autodesk/Revit design software and state-of-the-art equipment supporting CAD and the National "Project Lead the Way" program.
- Thunder Mountain High School has incorporated a state-of-the-art animations digital lab in order to offer integrated digital arts courses. The class introduces students to animation software tools used by professionals in the 3-D animation workforce using MAYA and Mudbox. Students learn the skills needed to create three-dimensional digital animations, and have the opportunity to work with a variety of animation techniques .
- TMHS utilizes ESRI software for GPS/GIS applications.
- TMHS utilizes the national Infinity Project software for digital engineering developed by Southern Methodist University.
- Both JDHS and TMHS have business/finance software and web-design/publishing programs as well as digital photography.

**Read & Write Gold**, is an assistive technology literacy software solution that allows students to access any curriculum and complete reading, writing, and research assignments as well as take tests independently. It is primarily used with our special needs populations.

### **Concluding Remarks**

When educators use the accumulating knowledge regarding the circumstances under which technology supports the broad definition of student achievement, they will be able to make informed choices about what technologies will best meet the particular needs of their classroom and students.

They also will be able to ensure that teachers, parents, students, and community members understand what role technology is playing in a school or district and how its impact is being evaluated. Finally, they will be able to justify the investments being made in technology.

The need to graduate students who are technologically literate has increased to the point where those who have that knowledge are at a considerable advantage over those who do not. Furthermore, the technologies available to help teachers increase student achievement of standards are critical to district improvement efforts. Innovative use of technology to foster student achievement can be built from the ground up by rewarding teachers who are invested in the process and have the ambition to apply best-practices in technology integration in their classroom.

*Element: The district will use curricula and teaching strategies that integrate technology effectively leading to improvements in student academic achievement that include a timeline for integration.*

*Acceptable Criteria: The timeline details the actions to be taken throughout the length of the plan to integrate technology in core curriculum.*

**Goal: Provide sustainable district-wide support for innovative and effective uses of technology to improve student achievement.**

### **Action Steps:**

A) Establish and utilize the technology integration budget as a source for teacher mini-grants to provide as funding for innovative uses of technology in the classroom. The Office of the Assistant Superintendent will work with the Office Instructional Services to establish guidelines for submitting proposals including maximum amount awards.

B) Require teachers who utilize the funding to be a part of an action-research course which develops an essential question, collects and analyses data in response to the question, and disseminates the information district-wide.

C) Budgeted amount for school year 2011-2012: \$35,000.

**Indicators:**

1. A cadre of instructors are applying best practices with innovative tools, conducting action-research to measure the effectiveness of their practices, and providing a model for potential system-wide impact.
2. Multiple data sets are collected to be analyzed for effectiveness of innovative technology integration practices.

**Timeline:**

- Spring of 2011: Application requirements and guidelines provided to teachers; submissions due with letter of support from Principal; partner with the University of Alaska Southeast (UAS) to structure an action research course;
- June of 2011: Applications reviewed and selected for innovative projects based on guidelines and potential for raising student achievement with emphasis in Literacy and/or Mathematics; potential applicants must agree to the conditions and additional requirements of the award if they are selected; administration finalizes the course with UAS;
- July of 2011: All applicants informed of their mini-grant status; successful applicants may place order; successful applicants may also leverage more funding from their site, PTO group, fundraising efforts, etc. to maximize quantity of innovative tools.
- August of 2011: Prior to the start of school, all successful applicants attend a workshop for initial training, gain an understanding of guidelines, gain an understanding of final outcomes and expectations of the mini-grant award, enroll in action-research course, agree upon schedule for bi-monthly face-to-face meetings and introduction to the Web tool to use for virtual, asynchronous meetings/discussions.
- 2011-2012 School Year: mini-grant participants conduct their project and action research making adjustments as needed based data collected along the way in formative (teacher developed and State-wide resources such as ACFA and Anchorage's Test Item Bank), interim (MAP assessment), and summative (Alaska Standards Based Assessment) data.
- Spring of 2012: Initiate another round of available mini-grants based on any carryover and budgeted amount in 2012-13 school year. (Repeat steps listed above for second cadre during 2012-13 School year).
- May of 2012: Participants complete all requirements of the mini-grant, participants share initial results with the Administration; further analysis of results can be compared once SBA Data is verified and desegregated.
- Fall of 2012: Administration evaluates effectiveness of innovative strategies for potential system-wide initiatives and budget implications for 2013-14 School Year.
- Spring of 2013: Upon review of effectiveness of the innovative strategies implemented in each mini-grant wave, Administration team adjusts conditions of the mini-grant application as needed in coordinating a third wave of mini-grants for 2013-14 school year.
- Fall of 2014: Administration evaluates effectiveness of second cadre for potential system-wide initiatives and budget implications for 2014-15 School Year.

This part of the plan addresses a number of themes raised by teachers, students, and community input. Technology integration into the core curriculum will occur with support for the necessary resources, staff-buy in and capacity building with research and development, use of technology in innovative ways, and system-wide potential with results and advocates to back it up.



## (C) Access

### Increase Access for All Students & Teachers

Equitable access to technology for all students is one of the imperatives of this technology plan.

In terms of access, the 2011-14 Juneau School District Technology Plan aims to :

- Provide equitable access for all technology users, enabling them to collaborate and communicate from a variety of technologies in a learning environment.
- Create and maintain a secure networking environment.
- Coordinate and encourage use of laptops for teachers
- Plan infrastructure for increasing numbers of mobile devices able to connect to the Internet
- Plan technology for indigent and ADA populations .
- Regular upgrade and maintenance of the network infrastructure
- Implementation of a secure wireless scheme for every site within the Juneau School District.
- Review network infrastructure, telephones, wireless and other systems and upgrade accordingly.
- Ensure that all technology assets are included in the inventory work-order system.
- Ensure that all new and renovated buildings follow standards set previously in this plan.

**Element:** *The district will ensure all students and teachers have increased access to educational technology in all schools.*

**Acceptable Criteria:** *Description includes how Ed Tech (Title II-D) funds will be used to help students in high-poverty and high-needs schools, or Title I schools in school improvement status (identified as level 2 or above). Provide data for high-poverty or high-needs schools or an explanation if it is not relevant.*

The Juneau School District will utilize its Title II-D funds to ensure teachers maximize their technology integration potential at their site. The funds will be used to assist in the costs of the Professional Development Goals and Action steps. The funds will assist with the cost of substitutes for technology integration workshops and trainings designed to improve instructional technology integration practices at the elementary and secondary level. The funds will also be utilized to help develop a cadre of Technology Integration experts. Title funds will be used to support technology interventions and after-school programs at elementary schools for literacy, mathematics, and science support. The Director of Curriculum, Instruction, and Assessment ensures that teachers in Title I schools have the necessary training to engage all students in rigorous, relevant, and meaningful educational technology activities. The secondary librarians, secondary coaches, and teacher technology integration experts cadre will provide

leadership and mentoring at their respective sites and assist teachers in implementing the integrated technology curriculum into the content areas of language arts, social studies, math, and science. The elementary instructional coaches will also play a vital role in coaching, mentoring, and modeling to enhance instructional practices at the classroom level (including technology integration); raise the level of student achievement; and strengthen teacher confidence in meeting the needs of diverse learners.

**Element:** *The district will encourage the development and use of innovative delivery strategies through the use of technology.*

**Acceptable Criteria:** *Description of strategies for the delivery of specialized or rigorous courses and curricula through the use of technology, including distance learning technologies, particularly in areas that would not otherwise have access to such courses or curricula due to geographical distances or insufficient resources.*

In addition to pursuing the goal of Digital Equity, the Juneau Borough School District is committed to harnessing the power of emerging technologies to provide innovative delivery strategies to meet the diverse needs of our students. Some of these technologies, such as interactive white boards and other digital devices, are utilized in traditional classroom settings.

The Juneau School District has developed the HomeBRIDGE program as a home school program to local families who need a flexible, individualized alternative for their K-12 student. Students enrolled in HomeBRIDGE may take advantage of the course offerings at their respective school, make use of the services of a certified teacher in the Family Learning Center, as well as the flexibility to received approved distance learning courses and/or pre-approved Curriculum from outside vendors. In order for High School Students to take advantage of the specialized courses, they must first meet with their counselor who would make a recommendation to the HomeBRIDGE program if the desired course was not available at Juneau Douglas High School. The HomeBRIDGE staff would then assist the student in finding an appropriate distance course delivered on-line that would satisfy the graduation requirements. The Juneau School District also offers UAS College Connection, that is a partnership between the Juneau Douglas High School, Thunder Mountain High School and the University of Alaska Southeast. The UAS College Connection is a dual enrollment program created for school district students who seek the challenge of college instruction. These students have either exhausted school course offerings, have shown solid ability and/or are highly topic-focused. Qualified high school students, 16 years of age and older may enroll in one or two UAS courses per semester while still in high school.

The Juneau Borough School District is a partner with the Alaska Learning Network and will utilize this resource to both develop and deliver courses of instruction. The goal of the Alaska Learning Network is to provide students and teachers with a comprehensive range of fundamental, advanced and specialized online learning tools by:

- Providing ongoing technology coaching and support to teachers
- Creating and distributing e-courses teachers can download, customize, and deliver
- Creating and delivering high school e-courses taught by AkLN staff
- Developing and populating a comprehensive database of online courses aligned with Alaska content standards and relevant to teachers and students throughout the state.

**Element:** *The district will ensure effective use of technology to promote parental involvement and increase parent communication.*

**Acceptable Criteria:** *Description of strategies to promote parental involvement and increase communication with parents.*

The Juneau School District will implement a number of strategies to promote parental involvement and increase communication with parents. The JSD Communication Plan is currently being carried out by the Communications Manager. One of the strategies in the plan is to improve the district and site websites to ensure timely updates, promote dynamic content, and streamline and standardize the navigation and interface across the district. While the district website provides parental access to curriculum, parent resources, and district-wide information, school sites communicate with parents about any special programs, course offerings, staff contact numbers and e-mail addresses. Individual staff members can also host a Website on the district's server to communicate more specific information about their classroom, assignments, syllabus, guidelines, policies, and the like. In addition, Juneau School District's staff have been trained in using e-mail to communicate with parents through the use of mailing lists or individual correspondence. Mailing lists typically describe the homework assignments and/or projects students need to complete, while individual correspondence details the specific progress of a particular student. Another important tool used in improving communication and parent involvement is "School Messenger" which provides timely announcements via phone services.

Additionally, the district uses its student information system, PowerSchool, to facilitate further opportunities for parental involvement in students' educational achievement. Parents are able to monitor their student's attendance, progress, assignments, and grades within a Web browser. Additionally, parents of high school students can monitor their child's graduation credits. Parents are also able to e-mail teachers from the PowerSchool connection.

Initiative 8 in the aforementioned JSD [Strategic Plan](#) has a number of action steps to enhance community and family involvement in schools including:

**Strengthen the district's volunteer program**

- Review other school district volunteer screening and engagement practices;
- Create volunteer handbook for schools;
- Inventory existing formal and informal volunteer resources;
- Develop electronic volunteer network bulletin board for each school website;
- Communicate internally and externally the volunteer program guidelines and share resources and celebrate volunteers;

**Increase home and school connections**

- Host parent information events on topics such as PowerSchool;
- Expand use of district website and school websites;
- Train staff of School Messenger system;
- Pursue the establishment of a central School District Help Line;
- Expand connections through Community Schools activities;
- Monthly information on literacy in parent newsletters

A copy of the updated policy and guidelines for parent/family/community involvement is included in Appendix C.

**Element:** *The district will describe how its schools will develop technology-based programs in collaboration with adult literacy services.*

**Acceptable Criteria:** *Describe a measurable strategy to work with adult literacy services. If not applicable, a description must be provided for the absence of a program.*

The Southeast Regional Resource Center and the Vocational Training Resource Center, run by the Central Council of Tlingit & Haida Indian Tribes of Alaska, provide training for adults seeking GEDs and literacy skills. Both agencies are located in the Juneau community and partner with the Juneau School District on a number of different initiatives.

## **(D) Professional Development**

### **Plan for Ongoing & Sustainable Professional Development**

**Element:** *The district will provide ongoing, sustainable professional development for teachers, principals, administrators, and school library media personnel to further the effective use of technology in the classroom or library media center.*

**Acceptable Criteria:** *Plans for the professional development program are clear. Technology professional development includes training in some content areas. A staff technology needs assessment survey is used which can be part of a needs assessment for Title IIA. Specific strategies will be identified for assessment of skills in technology of all certified personnel on an annual basis.*

A teacher technology needs assessment survey was conducted in March of 2011 to help develop the professional development goals and action steps of this plan. Results of the needs assessment can be found in Appendix D. Additionally, Atomic Learning will be utilized at the start of the 2011-12 School Year to assess all certified personnel 21st Century Technology Skills and provide an avenue of support for individualized learning. In the remaining two years of the plan, the ISTE NETs for Teachers will be utilized to establish benchmarks to assess teachers' technology skill levels. The following section will detail our specific plans for the professional development program.

**Element:** *The district will ensure that teachers are prepared to integrate technology effectively into curricula and instruction.*

**Acceptable Criteria:** *Description of strategies to improve the capacity of teachers to integrate technology across several academic content areas in the three-year time period is included.*

# Professional Development Strategies

**Goal: On-going professional development opportunities and workshops will be provided to increase the technological skills of all staff.**

## **Action Steps:**

A) Provide targeted professional development workshops with a minimum of 30 staff members from each site in technology integration for raising achievement in Math and Literacy.

B) Develop a cadre of Technology Integration Experts (Librarians and identified technology integration teacher leaders at each site) who can share their knowledge, mentor, and provide guided practice of integrating technology in the core content areas.

C) Utilize instructional coaches at K-12 to improve teachers' capacity to integrate technology into their classrooms with student achievement as the goal.

## Timeline of Activities

### 2011-2012 School Year:

- Using Atomic Learning's 21st Century Skills Teacher Assessment (to be taken by teachers at the first inservice day, August 19, 2011), the Teacher Technology Skills Survey feedback (given in March of 2011), and Principal feedback, targeted direct staff development workshops will be developed for each site using pull-out and substitute teachers. Each workshop will train no fewer than 30 staff members in current and emerging technologies for integration into classroom lessons including math, reading, and writing. Teachers will also be able to utilize the training modules in Atomic Learning on an individual basis.
- A cadre of technology integration experts (TIEs) will be identified at site levels starting with librarians to increase their capacity and pedagogy skills for 21st Century Teaching and Learning. The librarians and TIEs will meet on a regular basis to receive professional development in integrating 21st Century skills into the classroom using a framework of the ISTE NETs for Students and Teachers, the 21st Century Fluency Project, and the 21st Century modules and trainings available through Atomic learning. Dissemination of skills, knowledge, and teaching strategies will take place in site-based learning opportunities such as the Professional Learning Communities, staff meetings, and before or after school mini-workshops.
- The Juneau School District is moving to an instructional coaching model in grades K-12 to enhance instructional practices at the classroom level, raise student achievement,

- and strengthen teacher confidence in meeting the needs of diverse learners. The coaches will be expected to have demonstrated a knowledge and use of a rich array of effective instructional approaches, resources, and technologies. The coaches will work in classrooms with teachers (e.g. modeling, observing/reflecting, post observation discussions) with an emphasis on raising student achievement in math and literacy. When appropriate, the instructional coaches may work with staff at increasing their ability to integrate technology into their instructional practices.
- The Juneau School District will be hosting the Statewide Literacy Conference in October of 2011 with an expectation that all JSD certified staff be in attendance. The theme of the conference is “Digging Deeper: Mining for Meaning” and will include strands that incorporate literacy strategies into content areas. Examples include workshops on phonics, phonemic awareness, fluency, and comprehension at K/1 levels; vocabulary awareness, fluency, and comprehension at 2/3 levels; vocabulary development and comprehension development in content areas at 4/5 levels; and vocabulary analysis and comprehension in content area reading at 6-12 levels. Workshops will also include integration in technology, art, health, music, and drama.
  - Finalize Integrated Librarian Curriculum focused on a unified research model for K-12 and based on the American Association of School Librarians [Standards for the 21st Century Learner](#) and the [21st Century Fluencies Project](#).
  - Using multiple sources of data (such as teacher surveys, classroom observational data of instructional practices, and Standards Based Assessments) and evaluation of the impact of professional development will take place in the Spring of 2012 to make adjustments and plan appropriately for the following school year.
  - Disseminate data from innovative uses of technology that have resulted in increased student achievement (particularly by diverse learners) to the instructional staff and leadership.

#### 2012-13 School Year:

- Using the ISTE NETs for teachers (see appendix D), benchmarks will be established to assess teachers’ technology skill levels.
- Focus on integrating/aligning resources to core standards in literacy and math and building on the previous year’s work, all teachers will integrate dynamic and/or emerging technologies into at least one unit.
- Continue the use of a cadre of technology integration experts and librarians to improve capacity of staff to integrate 21st Century Skills into content areas.
- Continue using instructional coaches to enhance instructional practices through technology at the classroom level, raise student achievement particularly among diverse learners, and strengthen teacher confidence in meeting the needs of diverse learners.

- Using multiple sources of data (such as teacher surveys, classroom observational data of instructional practices, and Standards Based Assessments) and evaluation of the impact of professional development will take place in the Spring of 2012 to make adjustments and plan appropriately for the following school year.

2013-14 School Year:

- Including the activities from 2012-13 School Year, focus on integrating technology across all content areas where appropriate.

Additionally, the Juneau Borough School District is a partner with [Alaska's Learning Network](#) and will support teachers and Principals who utilize AkLN's professional development platform. Three staff members for the Juneau School District participated in the first ITLP (Individualized Technology Learning Plan) Cohort in February of 2011 and will be completing their plans by June 30th, 2011. The Juneau Borough School District will encourage teachers to take advantage of additional opportunities provided by Alaska's Learning Network.

## (E) Resources

**Element:** *The district will coordinate federal, state, local, and other funding sources to support student academic achievement, technology literacy, and integration of technology into curricula and instruction.*

**Acceptable Criteria:** *Description of how the district will coordinate activities funded through the Ed Tech Program (Title II-D) with technology-related activities supported with funds from other sources.*

The district will coordinate federal, state, local, and other funding sources to support student achievement, technology literacy, and integration of technology into curricula and instruction.

The Juneau Borough School District will reference online sources and current professional trade journals to inform decision making related to technology. The district will continue to partner with local resources, such as the Capital City Libraries, University of Alaska Southeast, South East Regional Resource Center, Apple Computer Training, the Alaska Learning Network, and Vocational Resources Training Center to further our goals for integrating technology throughout the classroom.

The Juneau Borough School District will continue to seek funding opportunities from state, federal, and municipal sources to expand and further integrate technology into teaching and

learning. For example, the district could seek on its Capital Improvements Project 6 Year Plan a bond issue to renew technology.

The Juneau Borough School District has utilized and will continue to apply these resources to support district-wide technology and career and technical programs at the high school level including: Alaska Department of Education and Early Development NCLB funds for intervention software licensing, staff development and training, targeted technology integration support, coaching, and mentoring, and additional hardware; General Operating funds for telecommunications, and matching grants with the 1 to 1 Laptop Consortium for Digital Learning projects, the 21st Century Grant program to fund an extended school-day learning option and purchase additional technology resources, General Operating funds for Technology Innovative Mini-Grants, individual site budgets for specialized software, additional classroom hardware (computers, digital projectors, document cameras, and related supplies), Carl Perkins Grant, Juneau Construction Academy, Alaska Department of Labor and Workforce Development Grants to enhance existing career and technical program offerings at JDHS and TMHS.

**Element:** *The district will ensure the supporting resources to ensure successful and effective uses of technology.*

**Acceptable Criteria:** *Description of the supporting resources, such as services, software, other electronically delivered learning materials and print resources in the inventory and to be acquired.*

All Juneau Borough School District staff and students have access to the following services:

- Internet access service
- District level and School/Program level Web pages for dissemination of information, events, and announcements; additionally teachers can create individual classroom Web pages upon request
- Access online to all the Juneau School Board adopted curriculum and School Board Policies and Regulations via the JBSD Website
- Increased communication services through *School Messenger*
- An online student information system (*Powerschool*)
- Access to a school district issued e-mail account (automatic for all staff; students may be issued a JBSD e-mail account with parental permission)
- Access district-level subscriptions to online resources such as *Classzone.com*, *Atomic Learning*, and *World Book Online*

All Juneau Borough School District staff have access to the following services:



- Access to resources for making data-driven decisions in individualized instruction through NWEA's Online Reports portal
- Access to student assessment history through the online student information system (*Powerschool*)
- Access to resources for formative and/or summative assessment tools in reading, writing, and mathematics such as the Anchorage Item Test Bank, the Alaska Computerized Formative Assessment System, and locally developed core assessments in mathematics

The following is a list of available software and electronically delivered resources utilized in multiple sites and/or programs in the Juneau Borough School District. Annual Subscription means it is currently in place and intended to be acquired for the upcoming school year. The list does not include specialized software or services purchased by individual school sites, and/or classroom teachers.

Item	Format	Funding	Purpose
Adobe Creative Suite	Software	Purchased	Design software for High School Students
All the Right Type	Software	Purchased	Keyboarding curriculum
Atomic Learning	Web-based	Annual Subscription	Online tutorials and resources for technology integration
Classzone.com	Web-based	Purchased	Online secondary mathematics resources supplementing the adopted curriculum
Destiny	Web-based	Purchased; Annual Subscription for tech support	Database for library resources
E-mail	Web-based interface	Annual Subscription	Communication
Fast ForWord	Software	Purchased/Annual Subscription for Tech Support	Language and learning skill intervention program
Filemaker Pro	Software	Purchased	Database
Final Cut Studio 2	Software	Purchased	Video editing software for Middle School and High School programs
iLife 06 - 11	Software	Purchased	Creativity tools for the Mac platform

iWork 06 - 09	Software	Purchased	General Productivity
Microsoft Office	Software	Purchased	General Productivity
PLATO	Web-based	Annual Subscription	Credit Recovery
PowerSchool	Web-based	Purchased; Annual Subscription for tech support	Student information system
Read and Write Gold	Software	Purchased	Assistive technology for literacy acquisition
SuccessMaker Mathematics	Software	Purchased; Annual Subscription for tech support	K-8 Mathematics intervention tool currently in place at Middle Schools
WorldBook Online	Web-based	Annual Subscription	Reference Material

**Element:** *The district will maintain an inventory of technology including provisions for interoperability.*

**Acceptable Criteria:** *Description of the type and costs of technology to be acquired with Ed Tech funds. (Title II-D). Description of how the district will gather information to meet the computer count requirement on an annual basis.*

In the future, Title II-D funds will no longer be used to acquire technology as 100% will go towards staff development costs to pay for substitutes while staff participate in workshops centered around technology integration for improvement in literacy and mathematics in connection with the JSD Strategic Plan.

During the 2009-2010 school year a web-based Work Order system was developed. Part of this effort was to provide an accurate inventory for computer assets for the District. During the summer of 2010 a hands-on inventory of every computer asset in the District was performed and key information was logged into this database. To keep this inventory current and accurate, IT Staff centralized all IT purchasing for the District and ensure all assets are entered into this database. All adds, changes, or deletes to this inventory are handled by IT staff, and as a result the Juneau Borough School District can query this database at any time and have the most up to date and accurate information available on our computer assets.

## (F) Accountability

**Element:** *The district will measure the effectiveness of integrating technology into curricula and instruction, increasing the ability of teachers to teach, and enabling students to reach challenging state academic standards.*

**Acceptable Criteria:** *Description of the process and accountability measures that will be used to evaluate: a) integration of technology, b) increased ability of teachers; and c) ability of students to increase achievement.*

**Element:** *The district will measure the effectiveness of the educational technology plan and the district's progress toward meeting the plan's goals.*

**Acceptable Criteria:** *Description of the process that enables the district/schools to monitor progress toward the specified goals and make mid-course corrections in response to new developments and opportunities as they arise.*

**Goal:** To provide ongoing feedback for continuous improvement of technology with regard to technology curriculum, hardware, software, and building infrastructure

### Evaluation

**Survey staff** This plan recognizes the importance of regular communications among staff, with a need for ongoing information. This plan aims to establish an avenue for staff feedback regarding the accomplishments and opportunities for improvements of this plan to the JSD Technology Committee.

This survey would ask for and provide:

- Feedback in the form of several questions about how technology is working for individuals and if the plan aligns with on-site reality, especially with technology integration, reliability of infrastructure, responsiveness of centralized tech support, increased technology abilities of teachers, increase (or decrease) in technology application in the classroom, and ability of students to increase achievement;
- Assessment of staff's familiarity with the plan

The first year's survey would emphasize awareness of the plan and solicit additional staff development needs not otherwise addressed. The survey would need to gauge staff and student infrastructure, as it supports the Tech Plan goals. In addition:

- The Administrative Technology point person will ensure local site committee meetings occur on an annual basis to provide cohesion among sites, and to collect additional evaluation data.
- Monthly District-wide technology meetings will occur with representation from each school and/or program.

### Action steps:

1. Continue clear communications between the JSD Tech Committee, site tech committees, and school district administration to ensure the continuity and collaboration of technology goals.

**Timeline:** Ongoing

**Element:** *The district will provide a list of persons involved in crafting this plan.*

**Acceptable Criteria:** *Representatives of the following five groups are included: administration, teachers, students, community and staff.*

The stakeholders listed on pages 4-5 of this plan included members who were administrators, teachers, students, community, and staff.

**Element:** *Technology Plan Review.*

**Acceptable Criteria:** *Processes for periodic review of district needs and revision of the plan.*

### **Technology Plan Review**

- The ongoing JSD Technology Plan (including goals and activities) will be clear and concise for staff overview
- The JSD Technology Team will compile reports with the JSD Technology Committee.
- Consult with other districts, state, local, and federal agencies at the Alaska Association for Technology in Education conference (ASTE) in February of each year
- JSD Technology Committee revises plan annually by April according to information gathered at this conference, focus meetings on the plan itself, and relevant data.
- Rework the revised plan in May, communicate plan revisions to the school board and district staff
- Submit the plan and annual addendum to the Alaska Department of Education and Early Development according to their requirements.

### **Addenda to the Technology Plan**

With each round of evaluation, the district will create an addendum to the plan:

- In order to make the plan a living document, it should be available in electronic format (Wiki, Weblog, or other content management system) for comment and revision.

### **Action steps:**

1. Survey staff focusing on Tech Plan awareness with secondary focus on reliability of technology to meet the goals of the plan.
2. Survey students to see if they are increasing their use of technology for school purposes.
3. Administrative Technology point person ensures site technology committee meetings happen annually; establishes the district roles for site committees;
4. Establish partnerships with district(s) with parallel goals; collaborate with attendees at ASTE Conference
5. District Technology Committee examines survey data, reviews the plan, and determines the focus for the following year.

### **Timeline:**

- Spring '11 – Technology Committee drafts potential survey
- Start of school – communication of plan to site staff meetings
- Fall '11 – Technology Committee reviews initial data from survey; advise roles for addressing needs
- Ongoing – Assistant Superintendent or designee liaisons with site committees
- Feb '12 – JSD representatives attend ASTE to collaborate
- Spring '12– follow-up survey with staff: JSD Technology Committee reviews data and determines focus of the plan for the '12-13 school year.

## (G) CIPA

**Element: Technology Protection Measure:** *Specific technology has been identified that will be used to **block or filter** Internet access. It must protect against access by adults and minors to visual depictions that are obscene, child pornography, or - with respect to use of computers with Internet access by minors - harmful to minors. **It may be disabled for adults engaged in bona fide research** or other lawful purposes.*

**Acceptable Criteria:** *Description of the technology measure that the district has in place and how the measure can be disabled for adults engaged in bona fide research for lawful purpose.*

The Juneau Borough School District uses a dedicated firewall appliance (SonicWall NAS-3500) to filter all inbound Internet Traffic. The District subscribes to a Content Filtering Service (CFS), which provides a baseline of filtering and configuration. Obscene images, child pornography, and content harmful to minors are blocked by both URL and key words. District IT Staff constantly monitor and update blocking and filtering.

A secure content filter bypass is provided for teachers and administrators to access legitimate content that might otherwise be filtered for bona fide research. The content filter bypass is accessed with a secure login and password provided only to adult staff members with explicit instructions that it is intended only for adult use. The filter bypass times-out after 90 minutes and a user must log back in to reestablish the filter bypass.

**Element:** *The Internet Safety Policy addresses the following issues:*

- a) access by minors to inappropriate matter on the Internet and World Wide Web;*
- b) the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications;*
- c) unauthorized access, including so-called "hacking," and other unlawful activities by minors online;*
- d) unauthorized disclosure, use, and dissemination of personal information regarding minors; and measures designed to restrict minors' access to materials harmful to minors.*

**Acceptable Criteria:** *Description of the Internet safety policy that addresses all the items outlined and includes the monitoring of online activities of minors.*

The Juneau Borough School District has established School Board policies and regulations regarding Computer Usage and Electronic Information Networks. A full copy of all the policies and regulations for each topic can be found at the following links:

- Policy 1530 - Electronic Information Networks: <http://www.juneauschools.org/board/policy/1530>
- Policy 1540 - Computer Usage: <http://www.juneauschools.org/board/policy/1540>

Before students utilize electronic information networks or computers, a student and parent must sign an acceptable use policy form and permission to publish. This document must be filed during registration or at the start of school. The individual school sites are currently responsible for distributing and obtaining the acceptable use policy and permission to publish forms. The acceptable use forms describe the board policies and regulations mentioned above. A current copy of the permission to publish form is available in Appendix G. The form will be undergoing some changes and the process streamlined to include as a field in PowerSchool, our student information system.

The following portions of the Juneau Borough School District's policies relating to Internet Safety have been highlighted below:

#### Policy 1540 - Computer Usage

The Juneau School District believes that computers and electronic communication technology are important educational tools. The district provides students, faculty and staff with access to computers and electronic information resources for educational and operational purposes.

Use of any of the district's technology is a privilege and not a right. Each student/teacher/staff member is expected to use the district's computer technology in an appropriate manner, which requires that use be efficient, ethical, and legal. The Superintendent shall develop regulations governing student and staff use of the district's computers and electronic communication resources.

Failure to abide by the regulations adopted pursuant to this policy may result in termination of the offender's privilege to use the district's computer technology and/or other disciplinary measures appropriate to the offense.

#### Policy 1540 - Computer Usage Regulation I. Appropriate Uses

In addition to any other uses that are not appropriate or which would violate the guidelines in these regulations, the district strictly prohibits and will not tolerate any use of its technology for activities related to the

- a) violation of any local, state or federal law;
- b) access, receipt, display, or transmittal of any pornographic or lewd information or access by minors of any material that is “harmful to minors” as defined in the Children’s Internet Protection Act;
- c) access, receipt, display or transmittal of information pertaining to the construction, manufacture or use of weapons, injurious devices, or toxic, poisonous or injurious substances except in the context of an approved educational or operational activity;
- d) participation in or organization of gambling;
- e) solicitation of or transaction of personal business or other profit-making activity, except in the context of an authorized educational activity;
- f) promotion of local, state, or national political causes or candidates;
- g) promotion of religion or religious activities;
- h) harassment or degradation of any individual or group;
- i) release of personally identifiable information about a student in violation of the district’s student records policy and regulations;
- j) unauthorized access of computer files, websites or systems, whether internal or remote or any other form of computer “hacking”.

## **Policy 1530 - Electronic Information Networks**

### **Regulation: Internet Procedures**

In order to safeguard student access to the Internet:

- Building principals will take measures to protect the safety and security of students when using e-mail, chat rooms and other forms of direct electronic communication;
- Students shall receive instruction on appropriate Internet use, which shall include cautions against disclosing personal information in public forums or arranging to meet in person with individuals whom students have “met” only on-line in the absence of appropriate assurance that the disclosure or meeting is safe.
- The disclosure, use, and dissemination of personal information regarding students must be in compliance with Juneau School District Board Policy 5770, Parent and Student Right of Privacy and Board Policy 8330, Student Records; and

- Access to material deemed a) obscenity, b) child pornography, or c) “harmful to minors” as that term is defined in the Children’s Internet Protection Act shall be restricted by Internet filtering software or other technologies.
- The district shall monitor the online activities of students using the district’s computer network, through direct observation and/or technological means, in an effort to prevent student access of restricted materials and other inappropriate use of the district’s computer resources.

In addition to the above policies, the Juneau School District utilizes the iSafe Curriculum for educating K-12 students on age appropriate Internet Safety topics. The iSafe Curriculum is integrated into health and science classes at the middle school and high school levels with reinforcement from the librarians/media specialists. At levels K-5, the curriculum is implemented through the elementary librarians/media specialists and counselors. A copy of the scope and sequence is found in the Appendix.

### **Recommendation**

The feedback from stakeholders indicated a need to examine our policies, regulations, and network agreements to account for students who bring their own technology to school for educational purposes, as well as other issues arising with emerging technologies such as cyber bullying and other forms of inappropriate digital communication.

#### **Element: Public Notice and Hearing**

The authority with responsibility for administration of the school or library has provided **reasonable public notice** and held at least **one public hearing** to address a proposed Technology Protection Measure and Internet Safety Policy.

**Acceptable Criteria:** Documentation of the public notice and agenda/minutes of the public hearing to address the Technology Protection Measure and Internet Safety Policy within the last three years.

A notice for a Public Forum on Technology in the Juneau School District was made available to the community on March 4th, 2011. The following announcement was made using the District Website, E-mailing a District-wide parent list, and Public Service Announcements on local radio stations:



## **Public Service Announcement**

### **Public Forum on Technology**

**March 4, 2011**

The community is invited to attend a *Public Forum on Technology in the Juneau School District* on Wednesday, March 9, 2011. There are two meetings to choose from:

12:00 noon in Room 154 of the Bill Ray Center, or  
6:00 pm in the Thunder Mountain High School Library

The purpose of the forum is to share some of the goals that will be included in the district's next 3-year technology plan and to gather public input on:

1. Student use of technology, given the uniqueness of the Juneau Community; and
2. Internet content filtering practices, both those that are required by law and those required by the JSD filtering policy.

Written input forms are available in the Announcements section of the district website at [www.juneauschools.org](http://www.juneauschools.org), or by contacting the John Wahl, Instructional Technology Coordinator, 523-1724 or [john\\_wahl@jsd.k12.ak.us](mailto:john_wahl@jsd.k12.ak.us).

Written feedback must be received by Friday, March 11, 2011. For more information see the Announcements section at [www.juneauschools.org](http://www.juneauschools.org) or call John Wahl at 523-1724.

The agenda for the meeting is as follows:

- Children's Internet Protection Act Compliance and Content Filtering
- Questions and Feedback
- Internet Safety Policy
- Questions and Feedback
- Goals and Objectives in 3-year Technology Plan
- Questions and Feedback

The sign-in sheets, presentation, and results from public feedback can be found in Appendix G.

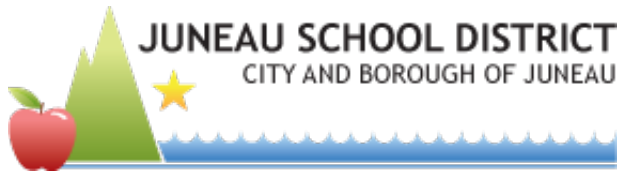
# Appendices

## Appendix A

Board of Education Goals 2008 -2013

Juneau School District Strategic Plan 2010 - 2014

ISTE NETS for Students



Published on *Juneau School District* (<http://www.juneauschools.org>)

[Home](#) > [Departments](#) > [Our District](#) > Goals

# Goals

## Juneau School District Goals 2008 – 2013

### **Goal #1 - Increase Student Achievement**

*Increase all student achievement to meet or exceed JSD core standards.*

- Significantly Increase Graduation Rate
- Significantly Increase Alaska Native Graduation Rate
- Increase Test Scores
- Increase Test Scores of Alaska Native, Poverty, English Language Learners and Special Education Students Meeting District Core
- Increase Number of Schools Meeting Adequate Yearly Progress
- Increase the Percentage of Student Enrolled in Advance Placement Courses

### **Goal #2 - Educate Students for Effective Citizenship**

*To be participating and contributing members of the community.*

- Increase Student Ability to Serve as a Community and Global Contributor
- Increase the Percentage of Students who Participate in School, Community or Civic Activities

### **Goal #3 - Assure system wide structures that support achievement, inclusion, and graduation for all students.**

*Implement educational practices that positively impact all underperforming groups of students.*

- Improve School Climate and Connectedness
- Improve School Climate and Connectedness for Alaska Native Students
- Increase Alaska Native Student Attendance
- Increase Percentage of Minority District Staff
- Increase the Use of Equitable Practices in the Classroom

- Increase the Percentage of Diversity Sub-Populations Enrolled in Advanced Placement Courses
- Increase the Percent of Diversity Sub-Populations Taking SAT/ACT

**Source URL:** [http://www.juneauschools.org/district/our\\_district/goals](http://www.juneauschools.org/district/our_district/goals)



# Juneau School District 2010-2014 Strategic Plan



## Student Achievement

1. Align grade level core standards in math and literacy with world-class goals in mind.
2. Implement an assessment system that informs instructional practice.
3. Engage all staff in the study and use of effective instruction and intervention strategies for all students.
4. Provide support systems to implement instructional programs with fidelity.



## Highly Qualified Staff

5. Create a coordinated professional development system that is responsive to achievement data, aligns with school and district improvement efforts, and maximizes the investment of district resources.
6. Study and practice leadership behaviors that are linked to increases in student success.
7. Strengthen our human resources strategy with improved hiring, orientation, training, feedback, and evaluation processes.



## Community Commitment

8. Strengthen community partnerships to enhance relevance in career technology programs, service learning, civics education, and across the curriculum.



## Culture of Service and Support

9. Develop and implement a service culture and efficient system of support at the District Office.



## 1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes
- b. create original works as a means of personal or group expression
- c. use models and simulations to explore complex systems and issues
- d. identify trends and forecast possibilities

## 2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats
- c. develop cultural understanding and global awareness by engaging with learners of other cultures
- d. contribute to project teams to produce original works or solve problems

## 3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- d. process data and report results

## 4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation
- b. plan and manage activities to develop a solution or complete a project
- c. collect and analyze data to identify solutions and/or make informed decisions
- d. use multiple processes and diverse perspectives to explore alternative solutions

## 5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- a. advocate and practice safe, legal, and responsible use of information and technology
- b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- c. demonstrate personal responsibility for lifelong learning
- d. exhibit leadership for digital citizenship

## 6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- a. understand and use technology systems
- b. select and use applications effectively and productively
- c. troubleshoot systems and applications
- d. transfer current knowledge to learning of new technologies

**Appendix B**

Understanding Multimedia Learning

Juneau School District Board of Education Policy for Curriculum Review  
and Adoption



# Understanding Multimedia Learning:

## Integrating multimedia in the K-12 classroom

Multimedia offers exciting possibilities for meeting the needs of 21<sup>st</sup> century learners. The use of multimedia instruction can significantly enhance student learning if properly designed and implemented. This paper describes the way in which the brain processes multimedia information and the principles behind effective multimedia instruction.

This research was conducted by SEG Research. The research was supported by a grant from BrainPOP.

September 2008





## Overview

Multimedia offers exciting possibilities for meeting the needs of 21<sup>st</sup> century learners. Multimedia learning can be defined in a number of ways. For the purposes of this paper we define multimedia learning as the delivery of instructional content using multiple modes that include visual and auditory information and student use of this information to construct knowledge.

Today's K-12 students are very different from even their recently graduated peers. These students are **digital natives**, a term attributed to futurist Marc Prensky to distinguish between those who have grown up with technology and those who have adapted to it. They live in a world in which digital technology is part of the texture of their daily lives. They have never known a world without technology. Technology is their "native language" and they expect to use technology in school.

While some students have greater access to technology than others, computers with Internet access are now nearly universally available in American schools. Internet-enabled computers and cell phones are pervasive outside of school. Use of technology by 5-18 year olds is at its highest level and is projected to increase.

This increased reliance on technology combined with what we know about brain processing, offers enormous potential for instruction. Research has shown us that the brain processes information using two channels—visual and auditory. When information is presented using both channels, the brain can accommodate more new information. By taking advantage of this multimodal processing capability and technology-based tools, we can dramatically enhance student learning through multimedia instruction.

## How the brain processes information

We are at the beginning of a revolution in neuroscience, and yet we know more about how the brain processes information than ever before. While a complete technical discussion of information processing and the brain are beyond the scope of this paper, to understand how multimedia can help students learn it is important to understand the basics of how the brain processes information.

### *How we process information*

Our ability to process information is a multi-step process that involves the perception, attention, selection, organization and integration of information (Sweller, 2003). At the center of this process is **long term memory**. As the name implies, our long term memory stores our accumulated knowledge. Our accumulated knowledge is organized into “chunks” of information in what are known as **schema**. Schemas allow us to organize information in meaningful ways and help us integrate and organize new information (Chi, Glaser, and Rees, 1982). In short, our long term memory is where what we know is stored and where we integrate new information. If information does not find its way into long term memory, it is lost. Learning can be thought of as change in our long term memory.

### *The limitations of working memory*

Before information can be integrated into long term memory it must be received and processed by our **working memory**. Working memory is very limited; it can only handle small amounts of information before it has to be integrated into our long term memory or lost. In his landmark article on this subject, George Miller (1956) suggested that we can only process about seven pieces of information at one time. And, we must do so quickly, as working memory can only keep information for about 20 seconds.

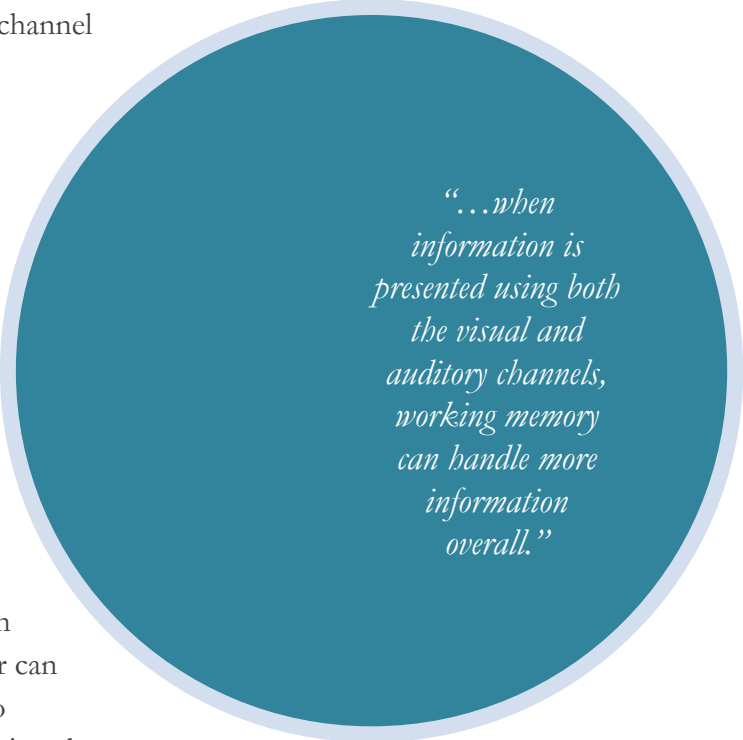
### *Multiple channels for information processing*

Researchers now believe that there are multiple channels in working memory. Baddeley (1992) proposes an auditory and a visual channel. The auditory channel handles information that is heard, while the visual channel processes

information that is seen. Text seems to have unique processing requirements, with words initially captured by the visual channel and then converted to sounds in the auditory channel (Mayer, 2005).

Research suggests that the visual channel handles less information than the auditory channel (Miler, 2005). However, when information is presented using both the visual and auditory channels, working memory can handle more information overall.

Using multiple channels can increase the amount of information that the brain can process (Sweller, 2005). But, there is still the risk of cognitive overload. Too much information delivered in an ineffective manner can interfere with the brain's ability to successfully integrate information into long term memory.



*“...when information is presented using both the visual and auditory channels, working memory can handle more information overall.”*

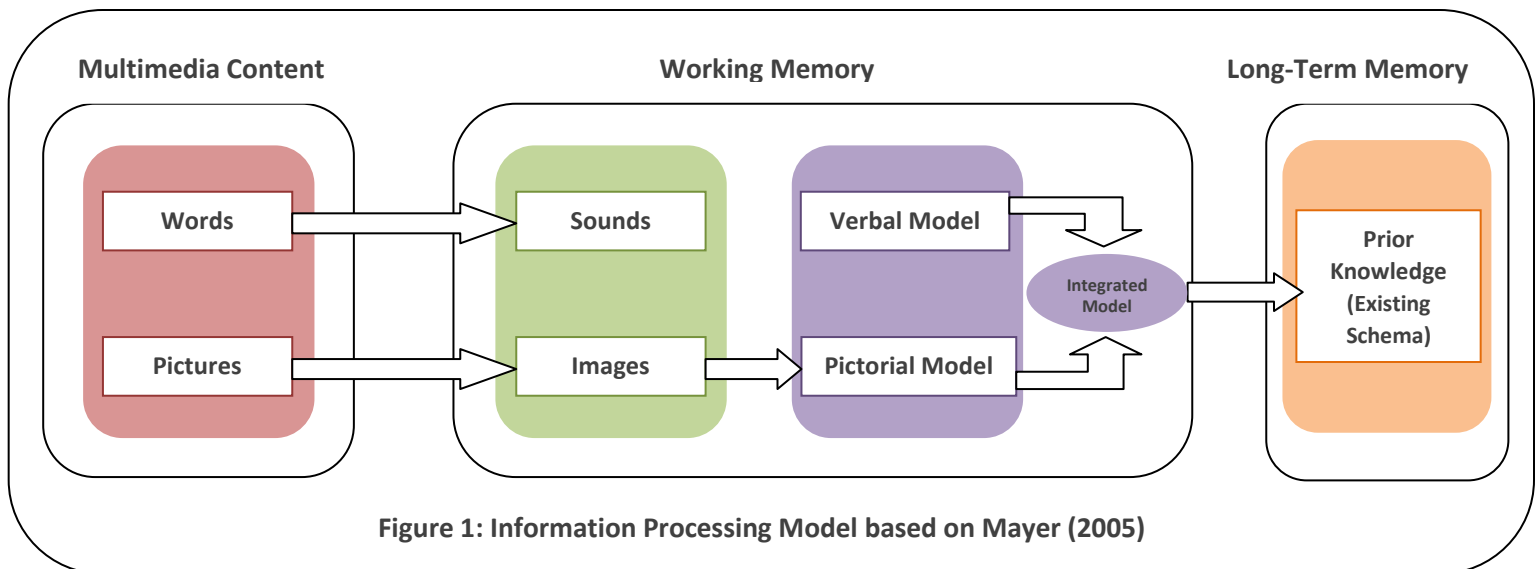
### ***Organizing information using schema***

The information in working memory is integrated into long term memory using existing schema (Sweller, 2003). If there are no existing schema in which to “fit” the information, new schema need to be created and working memory may need to do some extra work to help organize the information (Baddeley 1999). If information is poorly organized, or if it is difficult to relate newly presented information to existing schema, working memory can handle even less information. This can be prevented somewhat by presenting organizing information along with the information to be learned.

### ***Brain Processing and Multimedia Learning***

So what do we know about brain processing that is relevant to multimedia learning? We know that:

1. Effective multimedia recognizes that working memory has a limited capacity to process information.
2. Effective multimedia presentations take advantage of both the auditory and visual channels in working memory to deliver content. Using multiple channels increases the overall amount of information the brain can process.
3. Effective multimedia understands that text may be particularly challenging to process, with involvement from both the visual and auditory channels required.
4. Effective multimedia presentations recognize that long-term memory organizes information into meaningful chunks called schema. Presenting information in a way that makes use of existing organizing structures (schema) or that helps students organize the information can greatly assist the learner in incorporating information into Long Term memory.



Good multimedia instruction is driven by an understanding of how the brain processes information. The most effective multimedia applications take advantage of this knowledge.

## **What does effective multimedia look like?**

There is a growing body of research exploring what makes multimedia effective. Below, we identify some of the most important principles of multimedia learning and what the research says about how they contribute to student learning.

### ***Words and pictures are better than words alone.***

The fundamental principle behind multimedia learning is best described by Richard Mayer (2005), one of the leading researchers in this area: “People learn better from words and pictures than from words alone.” In this context, words include written and spoken text, and pictures include static graphic images, animation and video. That using both words and pictures is more effective than words alone should not be surprising in light of what we know about how the brain processes information. Research tells us that the use of both words and pictures lets the brain process more information in working memory (Sweller, 2005).

Extending this basic principle, Mayer (2005) and his colleagues tell us that narration and video is much more effective than narration and text. Similarly, narration and video appear to be more effective than narration, video and text. Narration and text rely on the same channel to process information (Baddelley, 1999). It seems that text heavy multimedia presentations may be less effective than those that rely on narration.

Recall that for learning to take place, information from working memory must successfully make its way to long term memory. By using multiple channels of working memory, multimedia content can increase the likelihood that information will be effectively integrated into long term memory and not lost. For example, a narrated animation that balances the presentation of content between the animation and the narration (and keeps the amount of text to a minimum) is more likely to be effective.

### ***Multimedia learning is more effective when learner attention is focused, not split.***

Multimedia applications are more effective when learner attention is not split. Split attention occurs when the learner is forced to attend to information that is far apart, such as when content is visually far apart on the screen or if it is presented at two separate points in time. In short, when related content is presented together in time and visually, learning is more effective (Mayer, 2005). When related content is not presented together, learner attention is split and the brain has more work to do to integrate the disparate sources of information.

Words and pictures presented simultaneously are more effective than when presented sequentially (Mayer and Sims, 1994). For example, narration and animation presented together are more likely to contribute to student learning than the presentation of narration and then animation (or animation and then narration).

Multimedia applications that have text and pictures presented in close proximity (or that may overlap) are more effective than those applications that present text and pictures far apart on the screen. When text is included with video or graphic information, it should be presented in close proximity to the pictures. Learners studying integrated information outperform learners studying the same information where attention is split (Chandler and Sweller, 1991). Integrated formats (e.g., presenting information on a single screen) are preferable to separate media (e.g., presenting information on screen and on a separate sheet of paper).

### ***The presentation of multimedia content should exclude extraneous and redundant information.***

Research suggests that multimedia learning is most effective when it includes only content that is relevant and aligned to the instructional objectives (Mayer, 2003). Kalyuga, Chandler and Sweller (1999) found that students learned more when extraneous and redundant information was not included in a multimedia presentation.

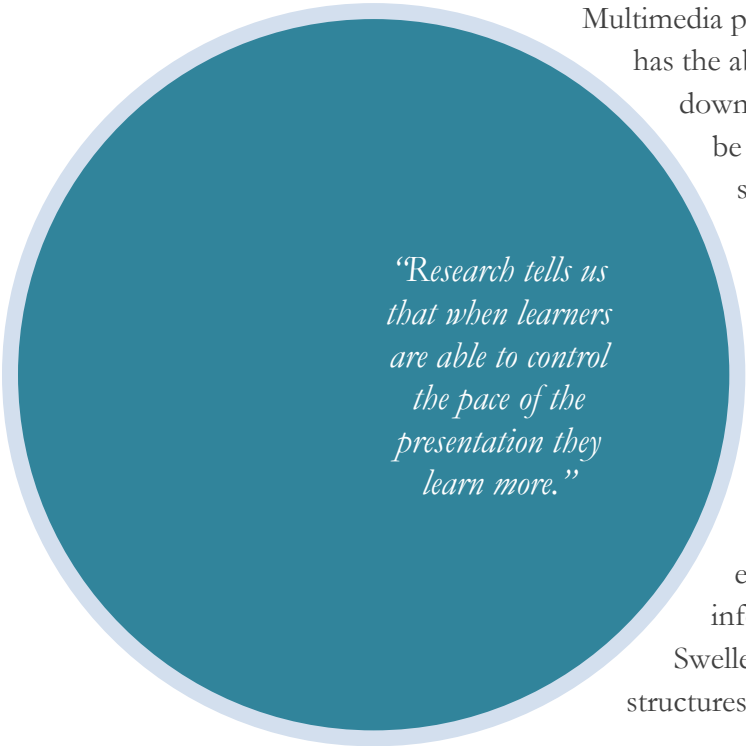
Learning is most effective when interesting and irrelevant information is eliminated because of the brain's limited information processing resources.

“Wasting” the brain’s limited resources on extraneous information is a detriment to learning. Precious brain resources should be focused on essential information aligned to instructional goals. Multimedia designers and users would do well to resist the temptation to present extraneous information.

It is important to distinguish between redundant information—which in this context means information presented at the same time—and instruction presented before and after exposure to multimedia content to prepare, reinforce or extend learning from the multimedia content. The activity preceding presentation of multimedia content and the activity following information are critical, as we will see when we examine other important principles of effective multimedia learning.

### ***Multimedia learning is more effective when it is interactive and under the control of the learner.***

Not all students learn at the same pace. Research tells us that when learners are able to control the pace of the presentation they learn more (Mayer, Dow, and Mayer, 2003).



*“Research tells us that when learners are able to control the pace of the presentation they learn more.”*

Multimedia presentations are more effective when the learner has the ability to interact with the presentation, by slowing it down or by starting and stopping it. This pacing can also be achieved by breaking the presentation into segments; shorter segments that allow users to select segments at their own pace work better than longer segments that offer less control.

### ***Multimedia learning is more effective when learner knowledge structures are activated prior to exposure to multimedia content.***

Learning from multimedia presentations is enhanced when the structures for organizing the information are activated (Pollock, Chandler, and Sweller, 2002). Helping students recall or acquire structures that will help them organize and understand the

information can be accomplished in several ways. Activation can be accomplished by allowing students to preview the content through demonstrations, discussion, directed recall and written descriptions. These preview activities should be directed at activating prior knowledge (Kalyuga, 2005), signaling what is important, and showing how the content is organized. Reviewing terminology that will be encountered, presentation of graphic organizers, class discussion, and assessments can also be helpful in activating prior knowledge.

Recalling our earlier discussion about how the brain processes information, these preview activities help activate existing schema (organizing structures) and create new schema to make it easier to absorb the new information in the presentation. Activating knowledge helps provide a structure from long term memory to understand and organize the new information from working memory.

### ***Multimedia instruction that includes animation can improve learning.***

When used effectively, animated content can improve learning. Several studies have suggested that learning is enhanced in computer-based animation environments (Park, 1994; Tversky, Bauer-Morrison and Betrancourt, 2002). Animation appears to be most effective when presenting concepts or information that students may have difficulty envisioning (Betrancourt, 2005). Animation can help the student visualize a process or other dynamic phenomenon that cannot be envisioned easily. This is especially true for processes that are not inherently visual (e.g., electrical circuits, forces in physics).

Animation seems to work better with novices than experts (Mayer and Sims, 1994). Students who are less familiar with the content in question are likely to benefit more than those who have more familiarity with the content. Animation also appears to be more effective when students have the ability to start and stop the animation and view it at their own pace or are able to manipulate various facets of the animation. When provided with the ability to interact with the application in this way, students seem to both enjoy the experience more and perform better when tested on the content (Mayer and Chandler (2001).



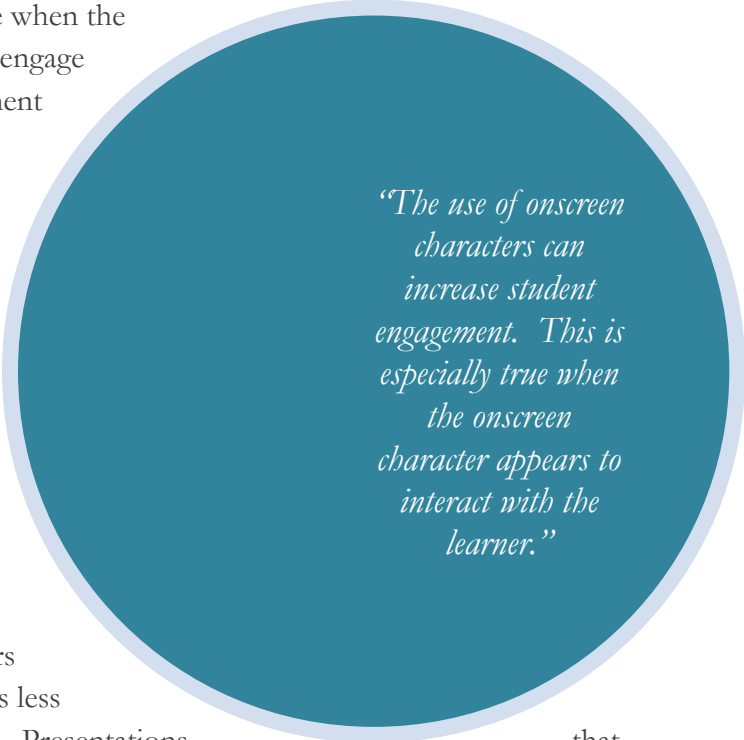
By enabling students to visualize complex information, animation may make it easier for the learner to make sense of the information in a way that requires less processing. In addition, animation is more likely to be effective if it is accompanied by narration, which makes use of both the auditory and visual channels.

### ***Multimedia learning is most effective when the learner is engaged with the presentation.***

Multimedia is most effective when the content and format actively engage the learner. Active engagement helps the student construct knowledge and organize information into meaningful schema (Mayer 2003). Research tells us that there are several ways in which we can make multimedia presentations more engaging.

Multimedia that is more personalized engages learners more than multimedia that is less personalized (Mayer, 2005a). Presentations that have a more conversational tone tend to be more engaging than those that have a more formal tone. And, presentations that use the more familiar “you and I” are more engaging than those that present in the third person (Mayer, 2005a). Learners tend to find presentations that use a familiar voice with a familiar accent more engaging than those that use a less familiar voice and accent (Mayer, Sobko and Mautone, 2003).

The use of onscreen characters can increase student engagement. This is especially true when the onscreen character appears to interact with the learner (Craig, Gholson and Driscoll, 2002). Presenting educational concepts in a



*“The use of onscreen characters can increase student engagement. This is especially true when the onscreen character appears to interact with the learner.”*

“story” format can also be effective in engaging students. The narrative format can engage students and help them learn (Lowe, 2002). The narrative format may help organize the information and make it easier to process. Combining onscreen characters and an underlying narrative to present content as a story can be particularly effective.

Engagement seems to play a role in activating knowledge structures (Mayer 2005). As with other activation strategies, engagement seems to help activate existing schema (organizing structures) and create new schema. This makes it easier to absorb the new information and facilitate the transfer of knowledge from working memory to long term memory.

***Multimedia learning is most effective when the learner can apply their newly acquired knowledge and receive feedback.***

Multimedia is most likely to be effective when students are provided with opportunities to apply what they have learned following exposure (Mayer, 2005). This reinforces and strengthens the newly acquired knowledge. Students should be provided with opportunities to integrate what they have learned with their everyday life. Other strategies that help students integrate what they have learned include follow-up learning activities, class discussions and group activities.

Feedback is an important part of the learning process, and multimedia is no exception. It is important to provide learners with clear feedback about their progress on an ongoing basis (Gee, 2005; Perkins, 1992). Feedback helps keep students informed about their progress and helps them stay engaged (Gee, 2005). Providing feedback can reinforce what has been learned and can also correct any misconceptions. Feedback is most effective when it is frequent and immediate.

Both formal and informal feedback can support learning following multimedia exposure. Formal assessments (tests and quizzes) should be supplemented by in-process monitoring and comments from teachers. Multimedia applications that provide opportunities for student self-assessment offer a particularly valuable opportunity for feedback. Providing follow-up activities, graphic organizers and other supplemental learning opportunities that students can undertake on their own can also provide a basis for feedback.

**Figure 2: Summary of Multimedia Learning Principles**

**Multimedia Content Characteristics**

1. Words and pictures are better than words alone.
2. Multimedia learning is more effective when learner attention is focused, not split.
3. The presentation of multimedia content should exclude extraneous and redundant information.

**Multimedia Delivery Characteristics**

1. Multimedia learning is more effective when it is interactive and under the control of the learner.
2. Multimedia learning is most effective when the learner is engaged with the presentation.

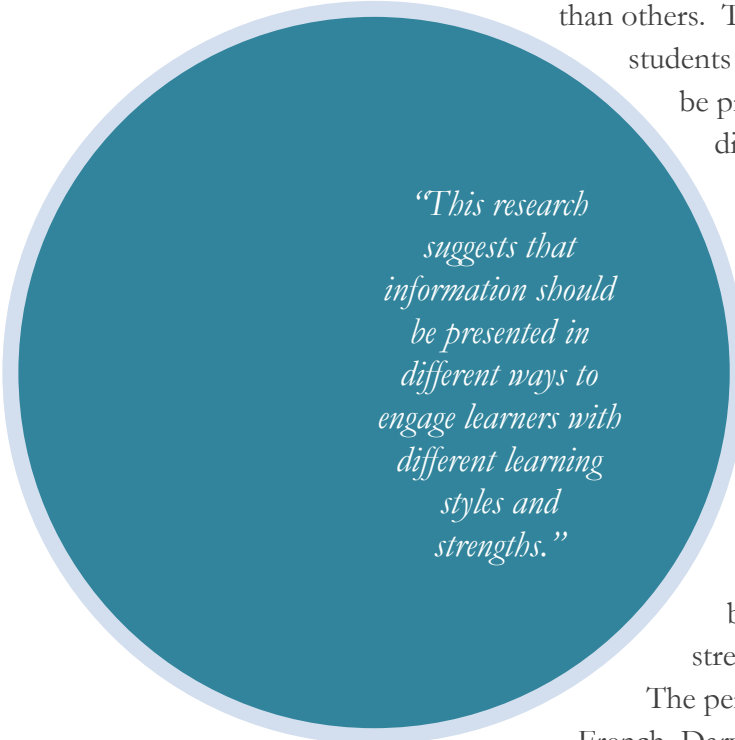
**Multimedia Context Characteristics**

1. Multimedia learning is more effective when learner knowledge structures are activated prior to exposure to multimedia content.
2. Multimedia learning is most effective when the learner can apply their newly acquired knowledge and receive feedback.

**Enhanced  
Student  
Learning**

## Individual learner differences and multimedia learning

As with any instructional tool, multimedia may work better for some students than others. There is a growing body of research showing that students learn in different ways and that information should be presented in different ways to engage students with differing learning styles.



*“This research suggests that information should be presented in different ways to engage learners with different learning styles and strengths.”*

Howard Gardner and his colleagues at Harvard suggest that individuals can exhibit a wide range of abilities, and that intelligence is best thought of as multiple areas of expertise or as **multiple intelligences** (Gardner, 1993; Gardner 1999).

Gardner suggests that there are eight distinct intelligences: linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal and naturalistic. This information can be used to direct instruction toward students’ strengths.

The perceptual learning styles model developed by Russell French, Daryl Gilley, and Ed Cherry (Institute for Learning Styles, 2008) in the late 1970s and early 1980s provides another useful way of viewing learner differences. This model proposes that learners extract information from their surroundings through the use of their senses and that there are seven pathways for learning: print, aural, interactive, visual, haptic, kinesthetic and olfactory.

This research suggests that information should be presented in different ways to engage learners with different learning styles and strengths. Students may have preferences for or learn most effectively through different modes. For example, one student may prefer or learn best from print, while another may prefer a more visual presentation of information. Multimedia learning may be particularly effective for visual and auditory learners.

Multimedia learning offers a significant opportunity to reach the greatest number of students and most effectively support students with different learning styles.

### **Conclusion**

Including multimedia as part of instruction can significantly enhance student learning. Research has contributed much to our understanding of how the brain processes information, and we know that multimedia that recognizes how the brain processes information is more effective than multimedia that doesn't. This paper highlights several principles that discriminate between effective and ineffective multimedia use for teaching and learning. While multimedia learning technology is not a panacea, it should occupy a prominent place in the 21<sup>st</sup> century instructional toolbox, as research has shown it to be a significant tool for student engagement and learning.

### **Find out more**

There is much written about multimedia learning. These two resources are an excellent starting place if you want to learn more.

Mayer, R.E. (2005) *The Cambridge Handbook of Multimedia Learning*. New York: Cambridge University Press.

Spector, J.M., Merrill, M.D., Van Merriënboer, J., Driscoll, Marcy, P. (2008) *Handbook of Research on Educational Communications and Technology*. Third Edition. New York: Taylor Francis Group

*This research was conducted by SEG Research, an independent educational research firm located in New Hope, Pennsylvania. The research was supported by a grant from BrainPOP, LLC.*

*SEG research provides research, evaluation, and assessment services to educational publishers, educational technology providers, assessment service providers and government agencies. SEG has been meeting the research and assessment needs of organizations since 1979.*

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## *Understanding Multimedia Learning: Integrating multimedia in the K-12 classroom*

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Kalyuga, S., Chandler, P. and Sweller, J. (1999). Managing split attention and redundancy in multimedia instruction. *Applied Cognitive Psychology*, 13, pp.351-371.

Kolb, D. A., Boyatzis, R., & Mainemelis, C. (2001). Experiential learning theory: Previous research and new directions. In R. Sternberg and L. Zhang (Eds.) *Perspectives on cognitive learning, and thinking styles*. Mahwah, NJ: Erlbaum

Lee, J., Grigg, W., and Dion, G. (2007). *The Nation's Report Card: Mathematics 2007*(NCEES 2007-494). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education, Washington, D.C.

Lowe, K. (2002) *What's the story: making meaning in primary classrooms*. ERIC Document No. ED468691

Miller, (1956) The magic number of seven plus or minus two. Some limits on our capacity for processing information. *Psychological Review*; Vol, 63, 31-97.

Mayer, R.E. (2003) *Learning and Instruction*. Upper Saddle River, NJ: Prentice Hall.

Mayer, R.E. (2005) Introduction to multimedia learning. in R. E. Mayer (Ed.). *The Cambridge Handbook of Multimedia Learning*. New York: Cambridge University Press.

Mayer, R.E. (2005a). Principles of multimedia learning based on social cues: personalization, voice, and image principles. In R. E. Mayer, (Ed.) *The Cambridge Handbook of Multimedia Learning*. New York: Cambridge University Press.



Mayer, R.E. and Chandler, P. (2001) When learning is just a click away: Does simple interaction foster deeper understanding of multimedia messages? *Journal of Educational Psychology*, Vol. 93, pp. 390-397.

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Mayer, R.E., Sobko, K., and Mautone, P.D. (2003) Social cues in multimedia learning: role of speakers voice. *Journal of Educational Psychology*, 95, pp. 419-425.

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Pollock, E., Chandler, P., and Sweller J. (2002) Assimilating complex information. *Learning and Instruction*, 12, pp. 61-86.

Sweller, J. (2003) Evolution of human cognitive architecture. In B. Ross (Ed.), *The Psychology of learning and Motivation* (Vol. 43, pp.215-266). San Diego, CA: Academic Press.

Sweller, J. (2005) Implications of cognitive load theory for multimedia learning, in R. E. Mayer (Ed.). *The Cambridge Handbook of Multimedia Learning*. New York: Cambridge University Press.

Tversky, B., Bauer-Morrison, J., & Betrancourt, M. (2002). Animation: can it facilitate? *International Journal of Human-Computer Studies*, Vol 57, 247-262.



Monday, May 2, 2011

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## Policy 1220 - Curriculum

The Board of Education shall provide a comprehensive instructional program to serve the educational needs of all the children in this district by the adoption of curricula, suited to the ages, interests, and abilities of all students. Development or revision of a specific curriculum should provide linkages to the curriculum areas where integrated elements occur.

Teachers are to align their teaching to District standards and curriculum. Building administrators are responsible for overseeing the implementation of the District's curriculum within the building.

For purposes of this policy, each curriculum for the Juneau School District should include, but need not be limited to the following:

A statement of philosophy;

1. Major goals for the cognitive, affective, and psychomotor domains;
2. An outline of the knowledge and skills to be presented;
3. A description of the means of assessing or evaluating student outcomes in relation to curricular goals;
4. Designated levels for the attainment of the knowledge and skills either by grade levels or across grade levels in multi-age settings; and
5. Criteria for evaluating the curricular program.

Curriculum documents shall align with district goals, content and performance standards and grade level expectations for curriculum established by the Alaska Department of Education and Early Development. The District shall adopt curriculum on a regular, six year development and revision cycle, as specified by the Alaska Department of Education and Early Development.

The Board shall determine which units of the instructional program constitute district-wide curriculum and are thereby subject to the adoption procedures of the Board. Other areas of study which supplement, reinforce, and/or enrich the district curriculum may be presented at the discretion of the building administrator.

The Superintendent is responsible for the periodic and continuous evaluation of district curricula and shall recommend to the Board revisions deemed to be in the best interests of the students. The Superintendent shall maintain a current copy of all District curriculum documents and shall provide each member of the Board of Education with regular updates regarding curriculum development, revision, evaluation, and proposed innovations.

The Superintendent or his/her designee shall be responsible for the development and review of curriculum guides subject to Board approval. This process should include:

A committee with:

1. Administrator responsible for curriculum
2. When possible at least two interested parents and in any event at least two and not more than six interested parents and/or community members
3. Students when appropriate

4. At least two staff members at each grade range of the curriculum
5. A review of current research in the field of each discipline and in effective instructional techniques.
6. Systematic review of previous curriculum guides and models from other districts/ states to insure their continuing usefulness in achieving goals set by the Board.

Innovative curriculum proposals are encouraged, including those originating from local school sites or from grade level staffs. The Superintendent's designee responsible for curriculum is expected to be an active participant in the development and review of such proposals prior to their presentation to the Board.

Information regarding any proposed innovative curriculum will include:

1. A brief analysis of the local school or grade level conditions that prompted consideration of the curriculum innovation;
2. Its rationale, in relation to the mission and goals of the district, along with any current supporting research related to the proposed program;
3. A description of the students to be served and how the curriculum innovation will impact their instruction;
4. A listing of those who participated in the development of the proposed program, including staff, parents, and community members;
5. An outline of the resources required for implementation, including any textbooks, resource materials, equipment, software, specially trained personnel, and staff development, and;
6. The measurable evaluative methods and standards by which its efficacy will be monitored and measured.

4AAC 05.080

*Cross Reference:*

[Policy #1510, Acquisition of Educational Resources](#)

Adopted: 01/17/95 (All day)

Revised: 11/20/07 (All day)

Reviewed:

## Regulation

In accordance with Policy 1220, the following Curriculum has been approved by the Board of Education:

### CURRICULUM ADOPTIONS

Mathematics - Grades K-12 (1991)  
 World Language - Grades 8 - 12 (1992)  
 Music - Grades K-5 (2000)  
 Science - Grades K-5 (2000), 6-12 (1999)  
 Social Studies - Grades K-12 (2000)  
 Music Arts 6-12 (2002)  
 Elementary Mathematics - Grades K-5 (2002)  
 Secondary Language Arts - Grades 6-12 (2003)  
 Technology - Grades K-12 (2003)  
 Language Arts - Grades K-12 2003  
 Physical Education - Grades K-12 (2004)  
 Visual Arts - Grades K-12 (2005)  
 Secondary Mathematics- Grades 6-12 (2006)  
 Skills for a Healthy Life - Grades K-12 (2007)

*Board Adopted Instructional Materials (Dates reflect the year of adoption):*

### MATH

Math Trailblazers, Kendall/Hunt Publishing 2002, K-5  
 McDougal Littell Course 1, 2006 - Grade - Middle School (EL 5th)  
 McDougal Littell Course 2, 2006 - Grade - Middle School  
 McDougal Littell Course 3, 2006 - Grade - Middle School  
 McDougal Littell Pre-Algebra, 2006 - Grade - Middle School  
 McDougal Littell Algebra I, 2006 - Grade - Middle School/High School  
 McDougal Littell Geometry, 2006 - Grade - High School  
 McDougal Littell Algebra II, 2006 - Grade - High School  
 McDougal Littell Pre-Calculus, 2006 - Grade - High School  
 ExploreLearning Online Manipulatives/Simulations, 2006 - Grade - Middle School/High School (also can be used in Science)  
 Successmaker Mathematics, Pearson; Computer-based intervention program (K - Pre-Alg. material), 2006 - Grade - Middle School/High School

### MUSIC

Share The Music, MacMillan McGraw Hill, 2000 - Grades K - 5  
 The Music Connection, Silver Burdett Ginn, Inc., 2000 - Grades K - 5

### SCIENCE

Life Science, Glencoe Publishers, 1999 - Grade -Middle School  
 Earth Science, Glencoe Publishers, 1999 - Grade - Middle School  
 Science Explorer 2000, Prentice Hall, 1999 - Grade -Middle School  
 Biology, Prentice Hall, 1999 - Grade - High School  
 Introduction Chemistry: A Foundation, McDougal Littell, 1999 - Grade -High School  
 Holt Physics, 1999 - Grade - High School  
 Fundamentals of Physics, DC Heath, 1999 - Grade - High School  
 Conceptual Physics, Addison Wesley, 2000 - Grade - High School  
 Oceanography: An Invitation to Marine Sciences, Wadsworth Publishing, 2000 -Grade - High School  
 Anthony's Textbook of Anatomy & Physiology, Academic Book Services, 2000 -Grade - High School  
 Living Things, Insights Hands-on Inquiry Science Curriculum, 2000 - Grades K-1  
 Pebbles, Sand & Silt, Full Option Science System (FOSS), 2000 - Grade K  
 The Senses, Insights Hands-on Inquiry Science Curriculum, 2000 - Grade K  
 Properties, Delta Science Module (DSM), 2000 - Grade K  
 Weatherwise, Science in a Nutshell, 2000 - Grade 1  
 Body Basics, Science in a Nutshell, 2000 - Grade 1  
 Liquid Explorations, Great Explorations in Math & Science (GEMS), 2000- Grade 1  
 Organisms, Science, Technology & Children (STC), 2000 - Grade 2  
 Finding the Moon, Delta Science Module (DSMII), 2000 - Grade 2  
 Tlingit Moon & Tide, University of Alaska Sea Grant, 2000 - Grade 2  
 Beginning Health & Nutrition, Carolina Biological Supply, 2000 - Grade 2  
 Motion & Design, Science, Technology & Children (STC), 2000 - Grade 2  
 Human Body, Full Option Science System (FOSS), 2000 - Grade 3  
 Secret Formulas, Great Explorations in Math & Science, 2000 - Grade 3  
 Food Chains & Webs, Delta Science Module (DSMII), 2000 - Grade 3  
 Bottle Biology, National Science Foundation, 2000 - Grade 4  
 Water, Full Option Science System (FOSS), 2000 - Grade 4  
 Learning About Learning, (GEMS), 2000 - Grade 4  
 Sound, Rising to the Challenge of the Nat'l Science Education Stds, 2000-Grade 4  
 Microworlds, Science in a Nutshell, 2000 - Grade 4  
 Ecosystems, Science, Technology & Children (STC), 2000 - Grade 5  
 Land & Water, Science, Technology & Children (STC), 2000 - Grade 5  
 Magnetism & Electricity, (FOSS), 2000 - Grade 5

### SOCIAL STUDIES

Alaska A Land In Motion, UAF/AK DOE/AK Geographic Alliance, 2001 - Grade 4  
U S Adventures in Time & Place, McGraw-Hill, 2001 - Grade 5  
Human Heritage-A World History, Glencoe, 2001 - Grade 7  
American Journey, National Geographic Society, 2001 - Grade 8  
World History: The Human Experience The Modern Era, Glencoe, 2001-Grade 10  
American History, The Modern Era Since 1865, Glencoe, 2001 - Grade 11  
Magruder's American Government, Prentice Hall, 2001 - Grade 12  
The American pageant, Eleventh Edition, Houghton Mifflin Co., 2001 - Grade A/P

#### SECONDARY LANGUAGE ARTS

The Language of Literature, MacDougal Littell, 2003  
Interactive, Integrated Literature, 2003, Grades 6-12  
Language of Literature, Literature Anthology, 2003, Grade 6  
Language of Literature, Literature Anthology, 2003, Grade 7  
Language of Literature, Literature Anthology, 2003, Grade 8  
Language of Literature, Literature Anthology, 2003, Grade 9  
Language of Literature, World Literature, 2003  
Language of Literature, American Literature, 2003  
Language of Literature, British Literature, 2003  
Language Network, MacDougal Littell  
Grade level appropriate grammar, writing and communication  
Language Network, 2003, Grade 6  
Language Network, 2003, Grade 7  
Language Network, 2003, Grade 8  
Language Network, 2003, Grade 9  
Language Network, 2003, Grade 10  
Language Network, 2003, Grade 11  
Language Network, 2003, Grade 12  
Bridges to Literature, MacDougal Littell  
Bridge the Gap for Struggling Readers in the Secondary Grades  
-Book 1- Gold Level (Average reading ability 3rd to 4th grade)  
-Book 2- Maroon Level (Average reading ability 4th to 5th grade)  
-Book 3- Emerald Level (Average reading ability 5th to 6th grade)

Added: 08/01/87 (All day)

Revised:

10/01/89 (All day)

11/20/01 (All day)

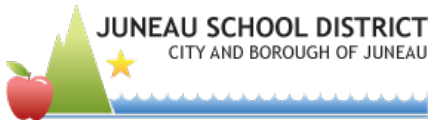
01/06/04 (All day)

11/20/07 (All day)

Reviewed:

## **Appendix C**

### **Updated Policy on Parent/Family/Community Involvement**



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## Policy 9110 - Parent/Family/Community Involvement

The Board of Education recognizes that parent /family/community involvement in education is a vital factor in the academic and social success of all children and, that a child's education is a responsibility shared by the school, family and the community during the entire period the child spends in school. To support the goal of the school district to educate all students effectively, schools, families and community must work as knowledgeable partners.

Although families are diverse in culture, language, and needs, they share the school's commitment to the educational success of their children. The Juneau School District and each school site shall, in collaboration with parents/families and communities, establish programs and practices that enhance parent/family/community involvement and reflect the specific needs of the students and their families.

To this end, the Board supports active and constructive parent/family/ community involvement programs at each school site. District personnel are encouraged to seek opportunities to broaden family and community involvement at all grade levels in a variety of roles. The parent/family/community involvement activities will be comprehensive and coordinated in nature, and shall emphasize outreach from the schools to special and/or hard to reach parent/family/community populations.

Therefore, the Board further directs the Superintendent to prepare regulations to implement this policy, and to report to the Board on the success of parent/family/community involvement and to recommend any needed improvements. Evaluation information on the effectiveness of parent/family/community involvement at each site and district wide shall be disseminated to the public.

In addition to the activities at each school site, the Board of Education supports the development, implementation, and evaluation of programs to involve parents/families/communities in the decisions and practices of the school district.

Engaging parents/families and the community is vital to student achievement. This school district shall foster and support active family/community involvement.

AS 14.03.120

4AAC.06.895

*Cross Reference #9200, Home to School Communications*

Adopted: 06/02/92 (All day)

Revised:

08/19/03 (All day)

04/04/06 (All day)

08/10/10 (All day)

Reviewed: 11/09/98 (All day)

## Regulation

Each school will have a parent involvement program plan that will be submitted to the Superintendent or designee and shared with parents of that school.

Programs will include, but not be limited to, the following components of successful parent/family/community involvement programs:

Communication between home and school is regular, two-way and meaningful.

Responsible parenting is promoted and supported.

Parents/families play an integral role in assisting student learning.

Parents/families are welcome in the school, and their support and assistance are sought.

Parents/families are full partners in the decisions that affect children and families.

Community resources are identified and made available to strengthen school programs, support families, and assist student learning.

Student performances and family/community events such as concerts, carnivals, family math nights, and class plays are sponsored each year.

Added: 04/04/06 (All day)

Revised:

Reviewed:



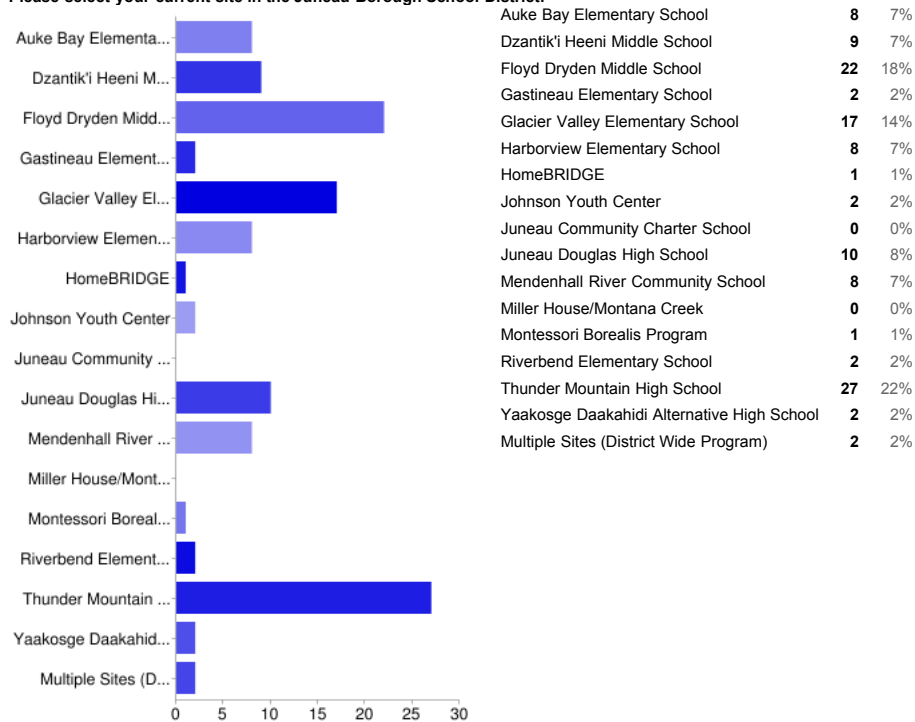
## **Appendix D**

Summary of Teacher Technology Skills Assessment Survey  
Itemized Responses of “Additional Comments” by School  
ISTE NETs for Teachers

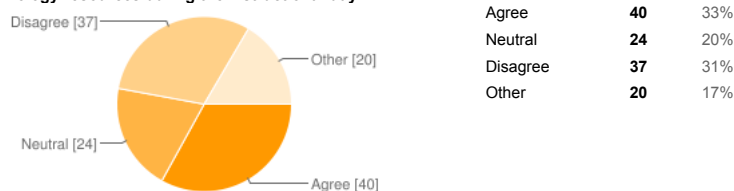
# 121 [responses](#)

## Summary [See complete responses](#)

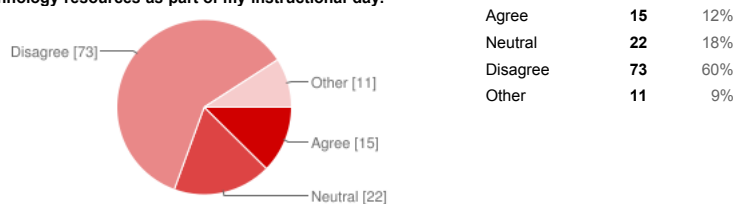
Please select your current site in the Juneau Borough School District:



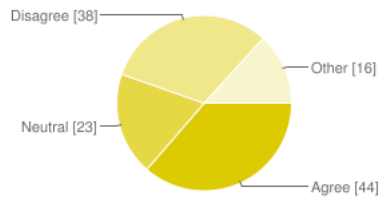
Constant technical problems prevent me and/or my students from using the instructional technology resources during the instructional day.



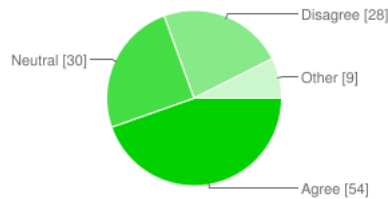
Though I may use technology for teacher preparation, I am not comfortable using my classroom technology resources as part of my instructional day.



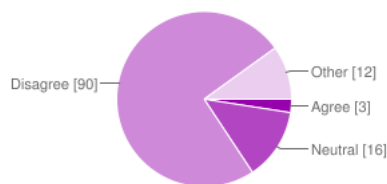
Given my current curriculum demands and class size, it is much easier and more practical for my students to learn about and use computers and related technology resources outside my

**classroom.**

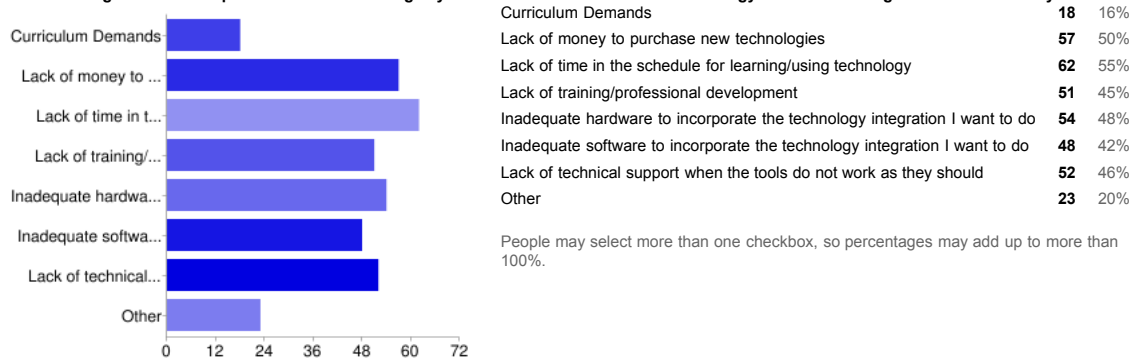
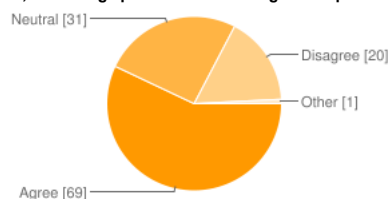
Agree	44	36%
Neutral	23	19%
Disagree	38	31%
Other	16	13%

**I am skilled in merging the classroom technology resources with relevant and challenging, student directed learning experiences that address the content standards.**

Agree	54	45%
Neutral	30	25%
Disagree	28	23%
Other	9	7%

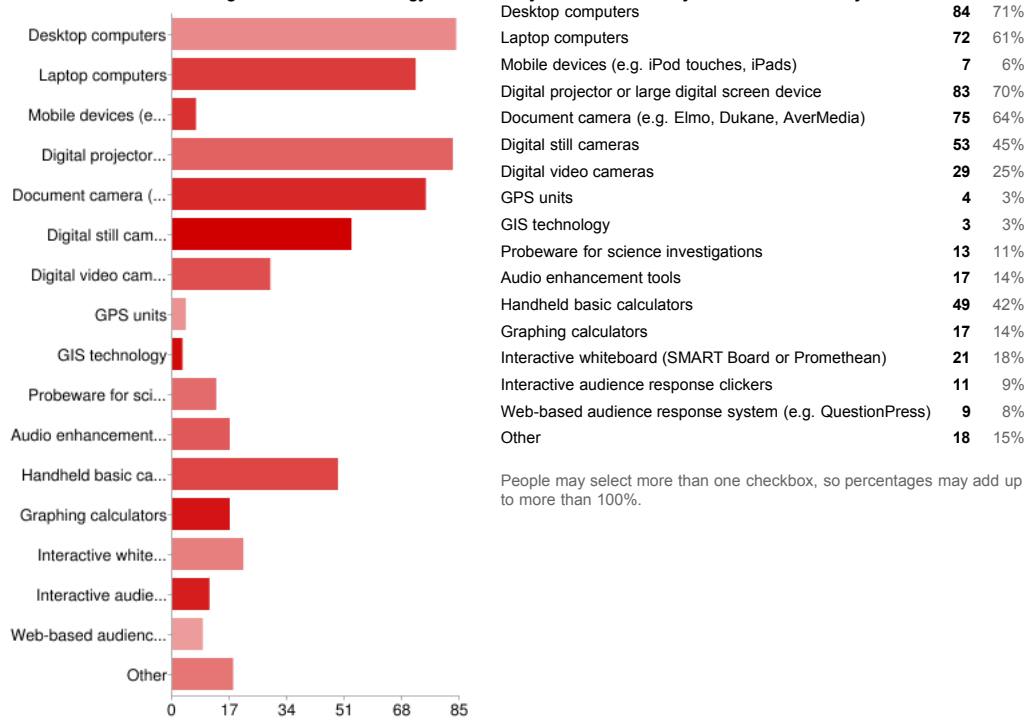
**My current instructional program is effective without the use of technology; therefore, I have no current plans to change it to include any technology resources.**

Agree	3	2%
Neutral	16	13%
Disagree	90	74%
Other	12	10%

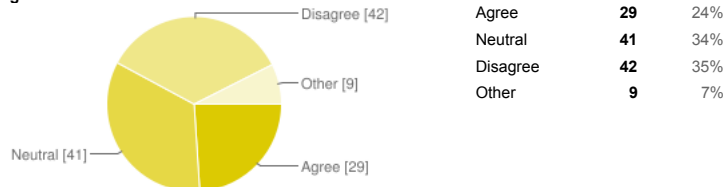
**The following barriers have prevented me from using any of the available instructional technology resources during the instructional day.****I am comfortable training others in using basic software applications, browsing/searching the Internet, and using specialized technologies unique to my grade level or content area.**

Agree	69	57%
Neutral	31	26%
Disagree	20	17%
Other	1	1%

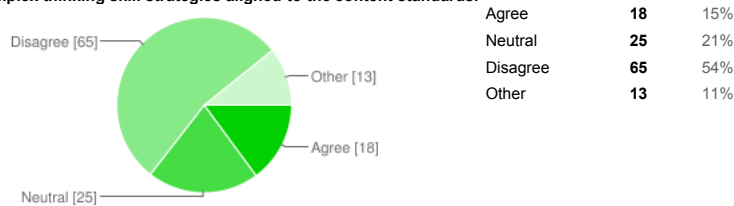
I have access to the following instructional technology devices at my site for use with my students and/or in my classroom



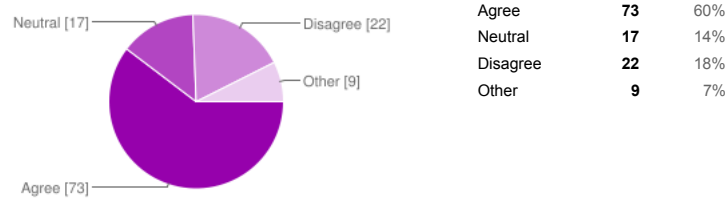
It is easy for me to identify and implement software applications, peripherals, and web-based resources that support student's complex thinking skills and promote self-directed problem solving.



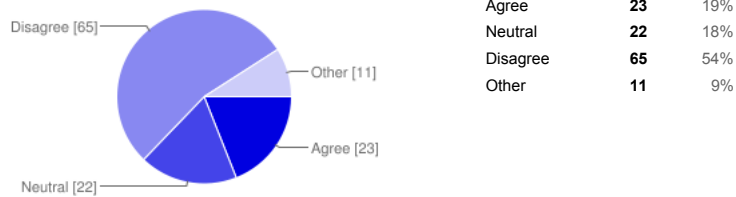
I frequently assign web-based projects to my students as a means of emphasizing specific complex thinking skill strategies aligned to the content standards.



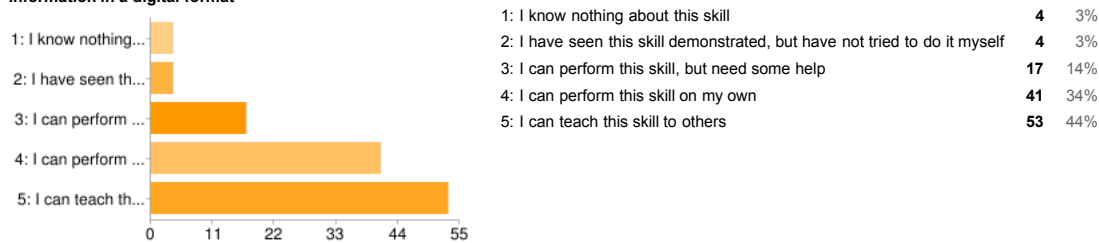
I need access to more resources and/or training to begin using the available technology resources as part of my instructional day.



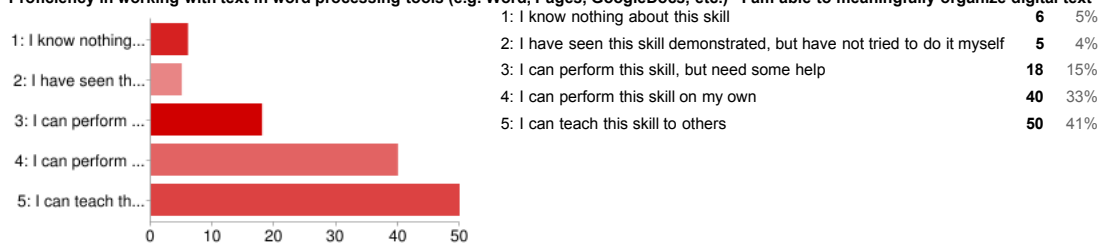
**My students create their own web pages or multimedia presentations to showcase what they have learned in class in addition to preparing traditional reports.**



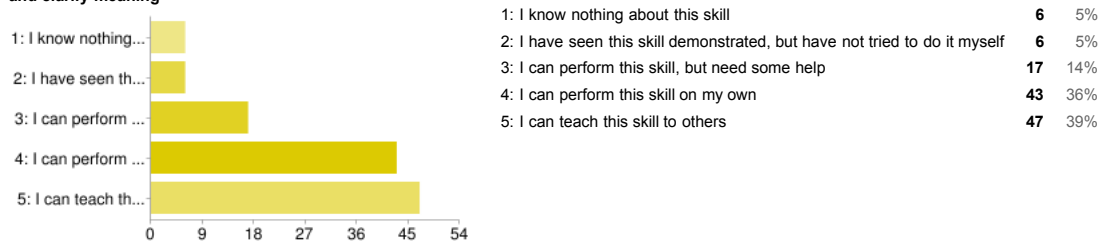
**Proficiency in working with text in word processing tools (e.g. Word, Pages, GoogleDocs, etc.) - I am able to collect and create textual information in a digital format**

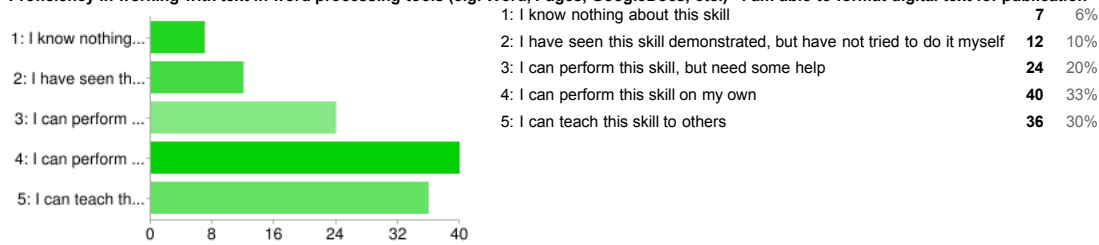
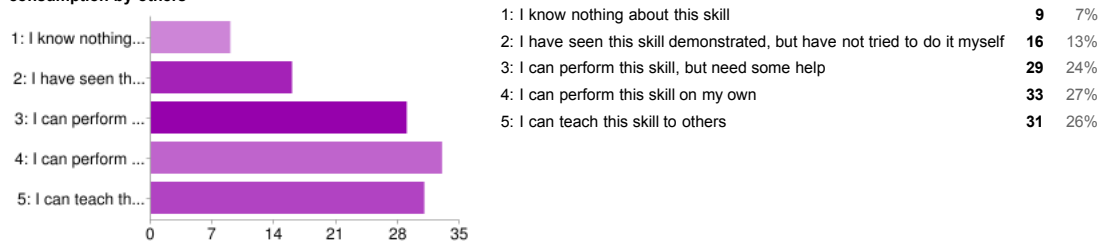
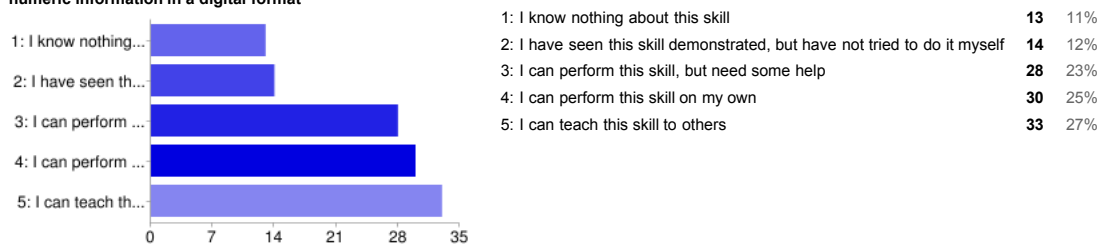
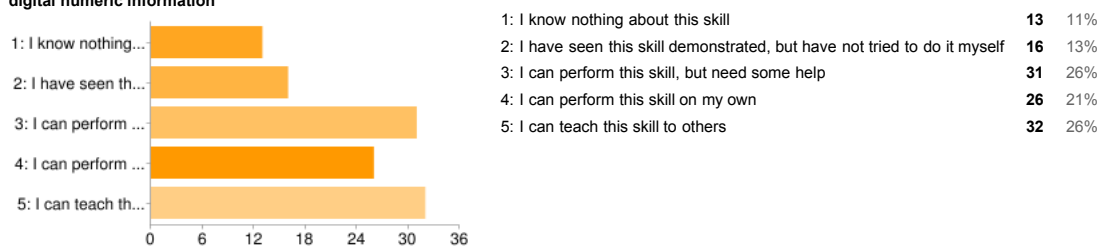


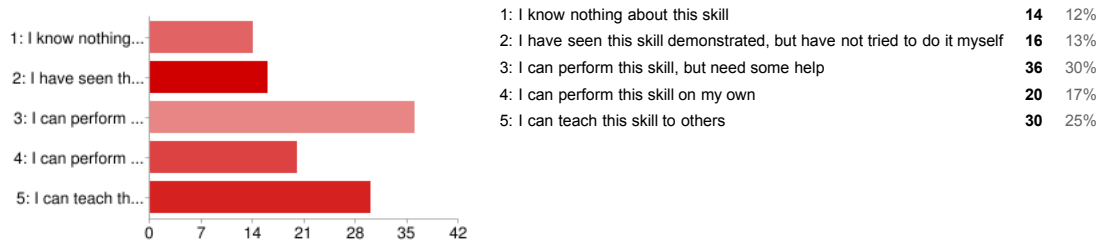
**Proficiency in working with text in word processing tools (e.g. Word, Pages, GoogleDocs, etc.) - I am able to meaningfully organize digital text**



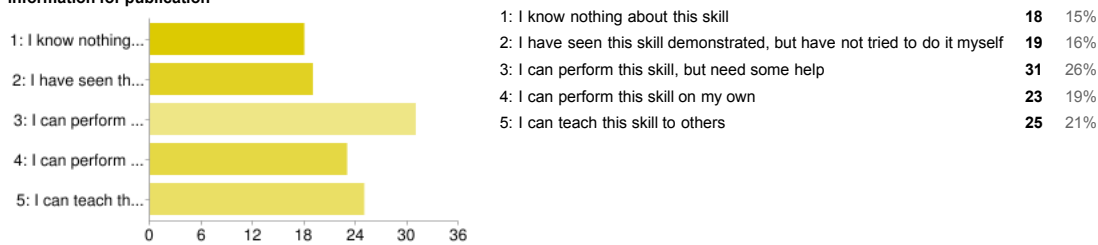
**Proficiency in working with text in word processing tools (e.g. Word, Pages, GoogleDocs, etc.) - I am able to manipulate digital text to create and clarify meaning**



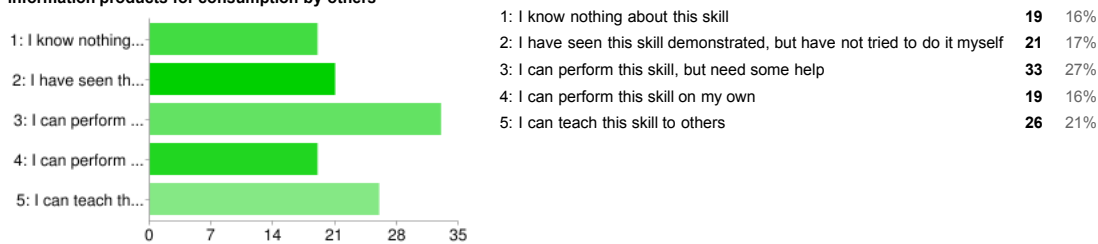
**Proficiency in working with text in word processing tools (e.g. Word, Pages, GoogleDocs, etc.) - I am able to format digital text for publication****Proficiency in working with text in word processing tools (e.g. Word, Pages, GoogleDocs, etc.) - I am able to publish digital text products for consumption by others****Proficiency in working with numbers in spreadsheet tools (e.g. Excel, Numbers, GoogleSpreadsheet, etc.) - I am able to collect and create numeric information in a digital format****Proficiency in working with numbers in spreadsheet tools (e.g. Excel, Numbers, GoogleSpreadsheet, etc.) - I am able to meaningfully organize digital numeric information****Proficiency in working with numbers in spreadsheet tools (e.g. Excel, Numbers, GoogleSpreadsheet, etc.) - I am able to manipulate digital numeric information to create and clarify meaning**



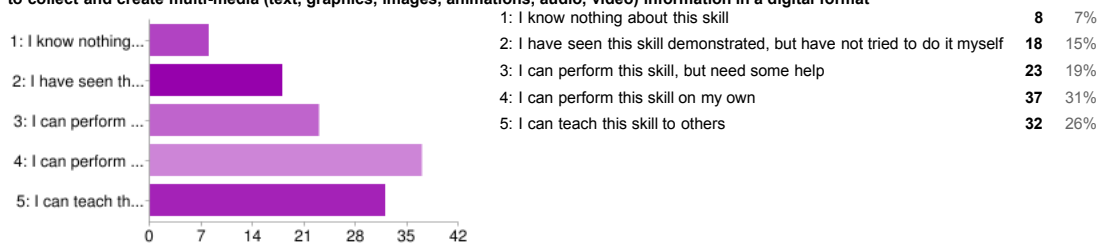
**Proficiency in working with numbers in spreadsheet tools (e.g. Excel, Numbers, GoogleSpreadsheet, etc.) - I am able to format digital numeric information for publication**



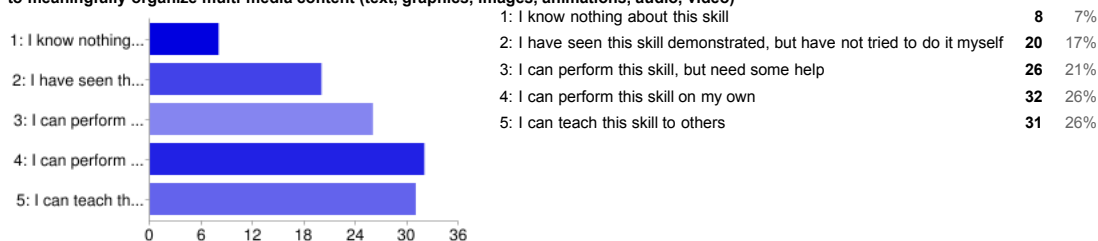
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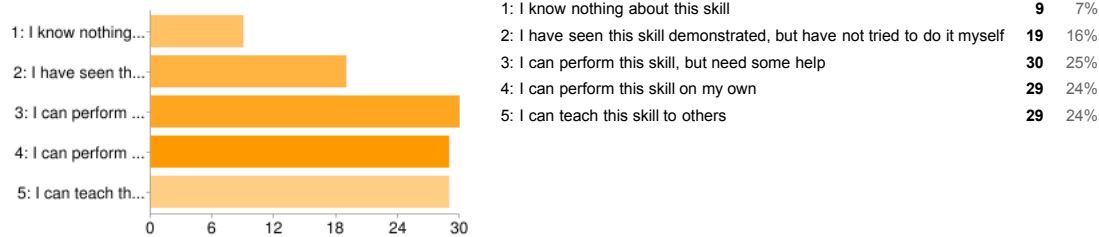
**Proficiency in working with multi-media in presentation software tools (e.g. PowerPoint, Keynote, Google Presentation, Prezi, etc.) - I am able to collect and create multi-media (text, graphics, images, animations, audio, video) information in a digital format**



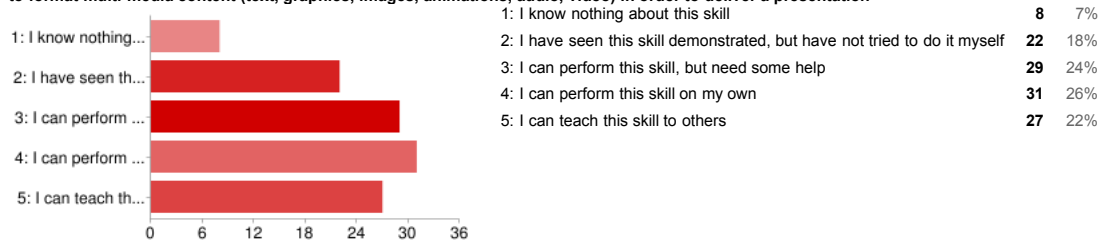
**Proficiency in working with multi-media in presentation software tools (e.g. PowerPoint, Keynote, Google Presentation, Prezi, etc.) - I am able to meaningfully organize multi-media content (text, graphics, images, animations, audio, video)**



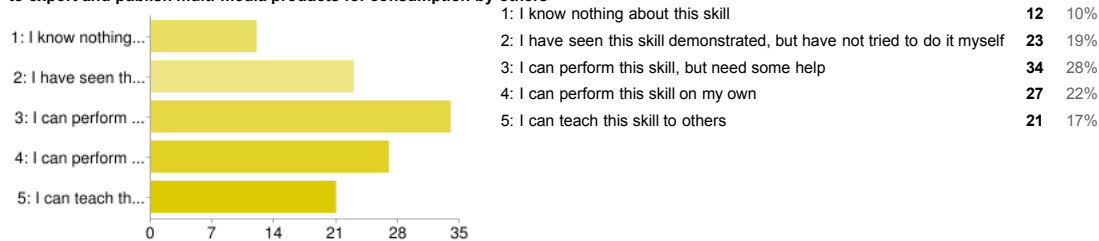
**Proficiency in working with multi-media in presentation software tools (e.g. PowerPoint, Keynote, Google Presentation, Prezi, etc.) - I am able to manipulate multi-media content (text, graphics, images, animations, audio, video) to create and clarify meaning**



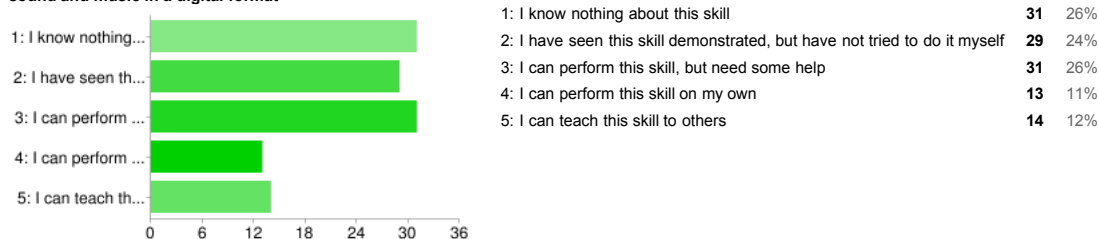
**Proficiency in working with multi-media in presentation software tools (e.g. PowerPoint, Keynote, Google Presentation, Prezi, etc.) - I am able to format multi-media content (text, graphics, images, animations, audio, video) in order to deliver a presentation**



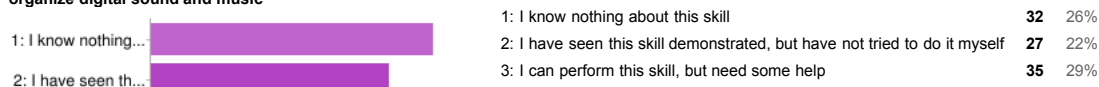
**Proficiency in working with multi-media in presentation software tools (e.g. PowerPoint, Keynote, Google Presentation, Prezi, etc.) - I am able to export and publish multi-media products for consumption by others**



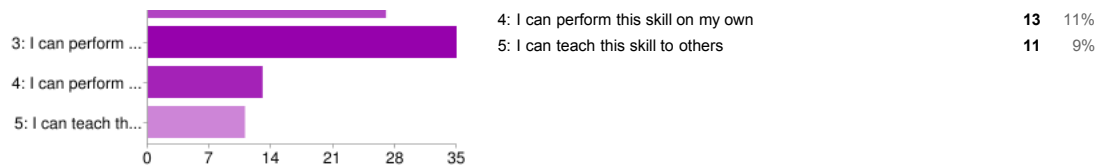
**Proficiency in working with an audio editing software tool (e.g. GarageBand, Soundtrack Pro, Audacity, etc.) - I am able to collect and create sound and music in a digital format**



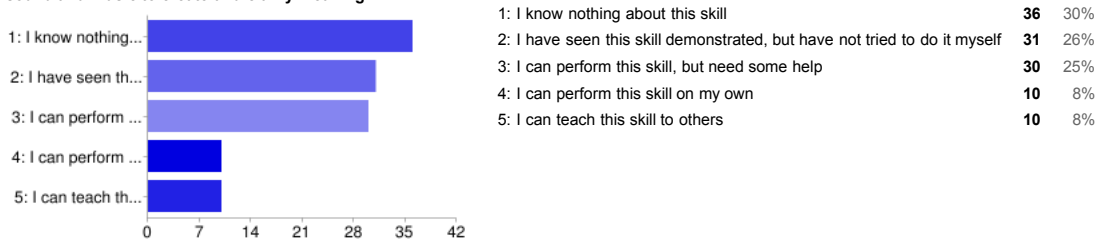
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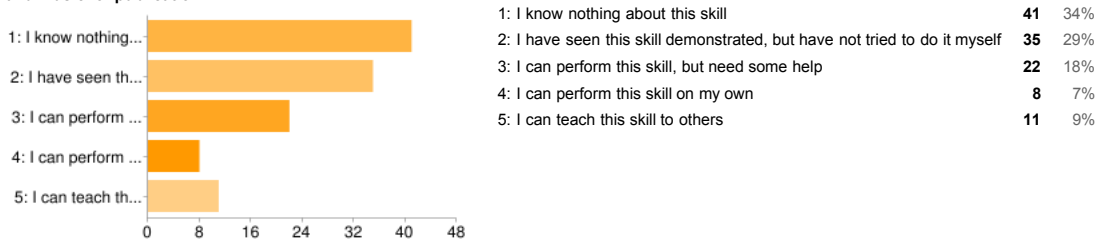




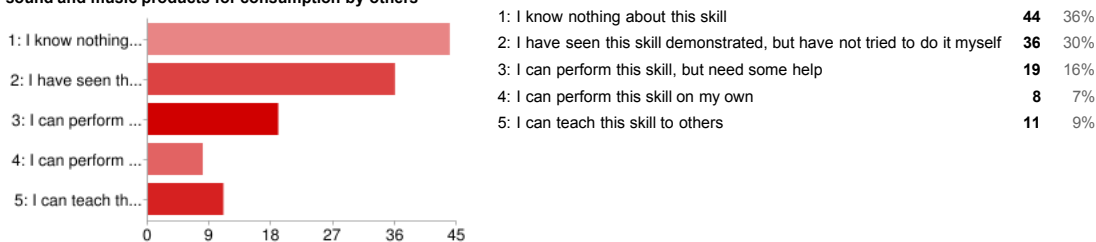
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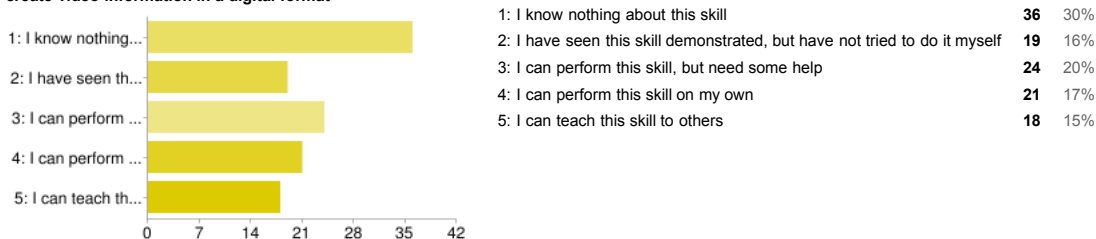
**Proficiency in working with an audio editing software tool (e.g. GarageBand, Soundtrack Pro, Audacity, etc.) - I am able to format digital sound and music for publication**



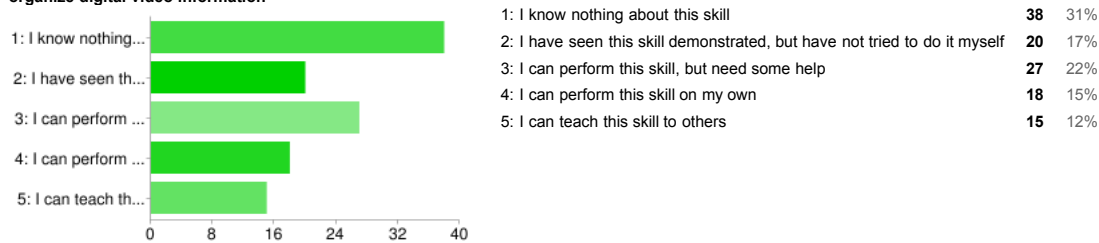
**Proficiency in working with an audio editing software tool (e.g. GarageBand, Soundtrack Pro, Audacity, etc.) - I am able to publish digital sound and music products for consumption by others**



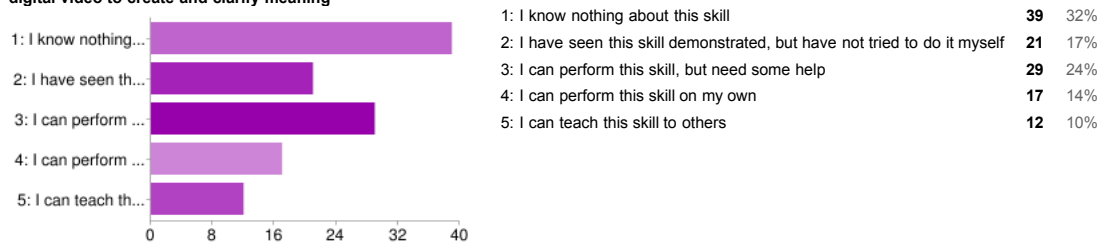
**Proficiency in working with video editing software (e.g. iMovie, Final Cut Pro, Avid, Adobe Premiere, or the like) - I am able to collect and create video information in a digital format**



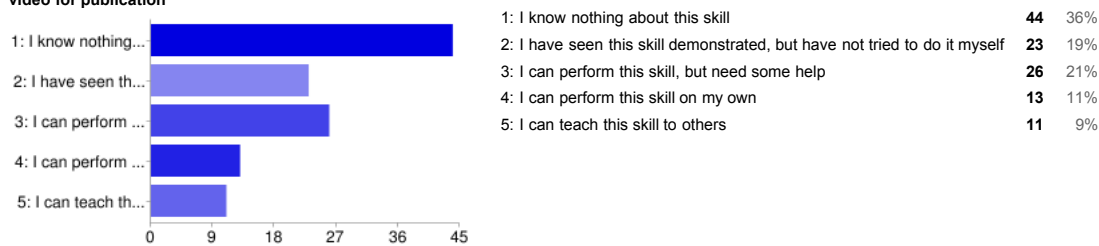
**Proficiency in working with video editing software (e.g. iMovie, Final Cut Pro, Avid, Adobe Premiere, or the like) - I am able to meaningfully organize digital video information**



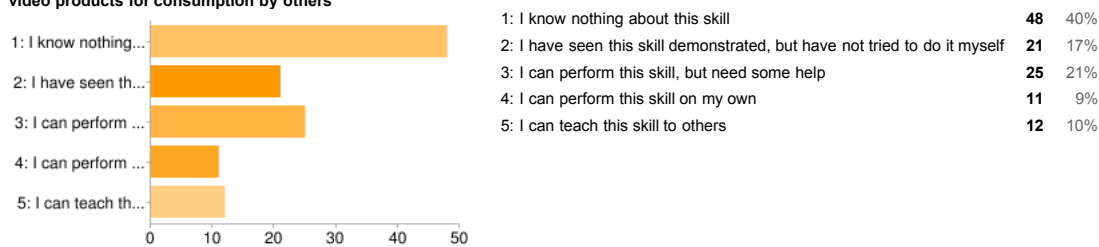
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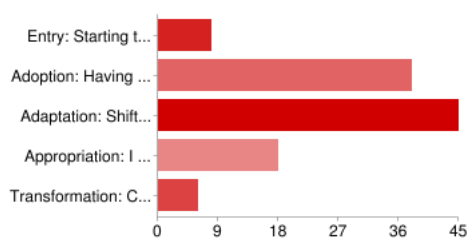
**Proficiency in working with video editing software (e.g. iMovie, Final Cut Pro, Avid, Adobe Premiere, or the like) - I am able to format digital video for publication**



**Proficiency in working with video editing software (e.g. iMovie, Final Cut Pro, Avid, Adobe Premiere, or the like) - I am able to publish digital video products for consumption by others**



I would classify myself as the following type of technology user



Entry: Starting to use technology for learning.	8	7%
Adoption: Having some comfort level with technology and are taking initial steps to integrate it in the curriculum.	38	31%
Adaptation: Shifting towards more student-based project learning and encourage the use of a variety of technology tools.	45	37%
Appropriation: I am so comfortable with technology that it is integrated throughout learning activities.	18	15%
Transformation: Creating new ways to use technology tools for real-world applications.	6	5%

**I am able to use technology in the following ways and/or the following technology devices in my classroom:**

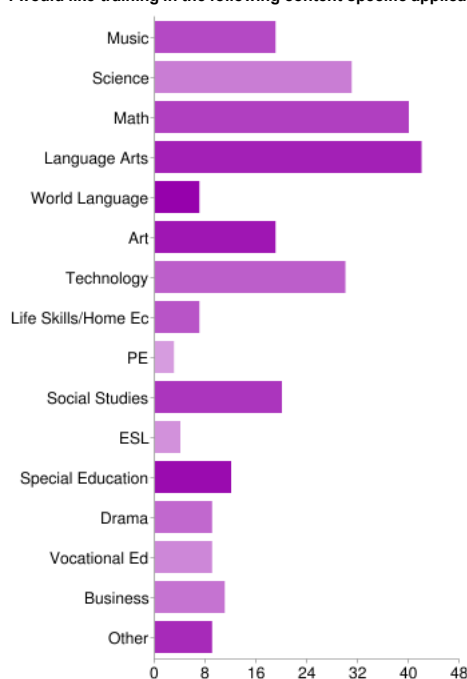
Create documents with word processing tools	110	96%
Conduct research via the Internet	108	94%
Create and present multimedia presentations for the class (e.g. PowerPoint, Keynote, or the like)	85	74%
Design collaborative projects for my students using digital tools	52	45%
Online tools to assess students	66	57%
Design curriculum that integrates technology	76	66%
Individualize instruction for students	65	57%
Let the students use a variety of technology resources to design their own projects	53	46%
Create units that integrate multiple content areas	61	53%
Provide authentic, real world activities	64	56%
Communicate with parents (e.g. Newsletter or Class Website)	77	67%
Conduct online interviews with content area experts	16	14%
Create and use a database	43	37%
Use an online database (e.g. EBSCO, Destiny, MAPs data, etc.)	55	48%
Web 2.0 tools (wikis, blogs, GoogleDocs, etc.)	45	39%
Mobile devices (smart phones, touch devices, tablets, etc.)	51	44%
Interactive Whiteboard	27	23%
Document Camera	75	65%
Import digital images from a digital still camera	93	81%
Edit digital images	75	65%
Import video from a digital video camera	64	56%
Edit video using software tools to create a finished movie product	38	33%
Burn an audio CD	85	74%
Burn a data CD and/or DVD	75	65%
Burn a movie to a DVD	53	46%
Upload a video to the Internet	43	37%
Send e-mail	108	94%
Attach documents to e-mail	106	92%
Scan an image or document and utilize the file	86	75%
Transfer files to/from external devices (e.g. thumb drives, external hard drives, servers)	98	85%
Back up the data on my hard-drive on a regular basis	64	56%
Use a web authoring tool to create a web page	41	36%
Create a podcast/audio file	32	28%
Use social media to collaborate	40	35%
Create and use a spreadsheet for collecting and manipulating data	67	58%
Create and use a spreadsheet for graphing and displaying data	53	46%
Learn new content using Google Earth	56	49%
Create content within Google Earth	19	17%
Use GPS devices for mapping, plotting, or collecting data	16	14%
Use GPS/GIS technology for creating new content	11	10%
Create PDF documents for broader distribution	45	39%
Other	1	1%

People may select more than one checkbox, so percentages may add up to more than 100%.

**I would like to have more training in:**

Basic computer skills (access programs, printing documents, navigating the operating system)	11	11%
How to use email more efficiently (writing, sending, receiving, adding attachments)	9	9%
How to use the Internet (searches, downloading data, creating Favorites)	11	11%
Specific software programs (MS Office, iWork, iLife, etc.)	44	43%
Software evaluation (picking programs for my classroom needs)	38	37%
Technology planning (how to develop and implement a unit plan and/or lesson)	37	36%
Technology leadership (decisions related to technology use)	27	26%
Integrating technology into the curriculum	63	62%
Using technology to teach various learning styles	50	49%
Using technology productivity tools (e.g. PowerSchool, calendar, mail merges with word processing)	30	29%
Classroom technology management	39	38%
Using technology for assessment	37	36%
Troubleshooting to solve common technology issues	38	37%
Multimedia software for creating podcasts, enhanced slideshows, and/or movies	54	53%
Online tools for collaboration, communication, and content creation	45	44%
Other	11	11%

People may select more than one checkbox, so percentages may add up to more than 100%.

**I would like training in the following content specific applications:**

Music	19	22%
Science	31	36%
Math	40	46%
Language Arts	42	48%
World Language	7	8%
Art	19	22%
Technology	30	34%
Life Skills/Home Ec	7	8%
PE	3	3%
Social Studies	20	23%
ESL	4	5%
Special Education	12	14%
Drama	9	10%
Vocational Ed	9	10%
Business	11	13%
Other	9	10%

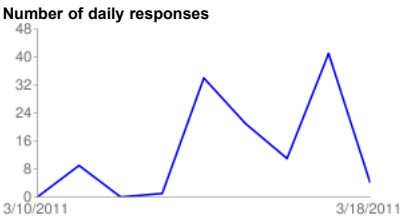
People may select more than one checkbox, so percentages may add up to more than 100%.

**Additional Comments:**

I would just like to have access to the technology. Without wireless in my classroom for 2/3 of the year, it seriously hampered my ability to incorporate it into student learning and experiences. This training should be supported by JSD, maybe during inservices? or teachers given release time? JYC, as a facility, imposes limitations as to what students can/not do. I would like some minor assistance in how to use my ELMO as well as ways to prevent students from going to JYC inappropriate sites (no social networking, scantily clad females, rap music, tattoos, etc.)

I really enjoy the interacti ...

Name						
	JO Dahl	Steve Byers	Amy Jo Meiners	David Kovach	Carin Smolin	Adam
Berkey	Susan Nachtigal		Ray Imel		Annie	
Smith	Pastorino		g kriegmont	Jan Neimeyer	Wells, K	Tyree
Pini	Sheryl Wittig	Graham Storey	Delores	Casady Herdin	...	



	Additional Comments:
<b>Auke Bay (Elem)</b>	<p>I really enjoy the interactive SMART board lessons for my students. I wish we had more than one board in our building so that I could have staff to better create meaningful content lessons with multiple users. I'd also like to have the clickers so that I can have better formative assessment. I think technology is great but will the district support new stuff.... having the tech people not in the building seems like it will be a huge hurdle for help. Also nice we can stream things but just got an email saying to slow it down on using it. So will the district put more money in to see the current news? So what are we to do???</p> <p>Way too long of a survey for teachers.</p> <p>I would like training in Excel spreadsheets, designing and sending daily newsletters with photos, using more technology in my classroom.</p>
<b>Dzantik'i Heeni (MS)</b>	<p>We need functioning technology in our classrooms, which we currently don't have. We would love to be doing more of the things listed but without functioning computers it is impossible.</p> <p>I am not going to waste time developing new tech skills until we have new hardware and bandwidth so that we can actually use the skills we have. I'm frustrated.</p> <p>We are hurting for coordination, budgeting, planning and maintenance. Please give back the site techs!</p>
<b>Floyd Dryden (MS)</b>	<p>With my recent tech. dormancy years and moving from a PC district, I could use refresher courses. I used to teach with smartboard and video cameras electronic portfolios.... The loss of practice using technology rich lessons concerns me. I do not want to feel out of touch with practice and IF we are to lose valuable tech support, I also believe I need to learn how to better tech support myself. I feel a long way from "podcasting". I find that I am feeling safer with Elmer and Fiskar.</p> <p>I'm concerned that we will be losing our building site tech. experts just as a number of us are working towards integrating technology in our classrooms. I am located in a modular behind the school. I do not have access to an ELMO, Projection screen, sound system or technology device in my classroom. I have a TV, VCR, laptop, computer, and CD player. Music theory using technology is limited to reserving the computer lab at the school to use the computer lab. Hopefully, this will change next year as I request technology tools to enhance student learning in my classroom.</p> <p>Keep Rich Culver at Dryden, help desk is a waste of his talents and our time.</p> <p>Juneau is incredibly behind in technology. There are not enough computers for easy student access and most of the computers available do not have enough memory or adequate updates for new software components.</p> <p>We really need hardware/software updated on a scheduled basis - every five years? But some plan in place.</p> <p>Alan here. In hosting my QuestionPress program around the world I get to work with a lot of schools and school districts on technology. I have a thread with ALL of my customers - they all have certified educators dedicated to help integrate technology in the classrooms. These are the hardware specialists who make the show work. JSD did have tech mentors years ago but that grant ran dry, and I think it shows. I need help the staff keep up. At ASTE I see what other districts around the state, both big and small, are doing. They are moving much faster and more progressive than JSD. My fear is the proposed changes in the tech strategy and the lack of tech mentors is going to severely cripple this district.</p> <p>The Floyd Dryden website with tools such as assessment manager and discussion boards has been valuable and user-friendly.</p>
<b>Gastineau (Elem)</b>	<p>This training should be supported by JSD, maybe during inservices? or teachers given release time?</p>
<b>Glacier Valley (Elem)</b>	<p>I can use technology comfortably for the most part. I do not directly use technology a great deal with my students because I work with students who are not always in their best interest to have them on the computer.</p>

	Additional Comments:
<b>Harborview (Elem)</b>	<p>I would just like to have access to the technology. Without wireless in my classroom for 2/3 of the year, it seriously hampered my ability to provide student learning and experiences.</p> <p>thanks for asking for feedback</p>
<b>Juneau-Douglas (HS)</b>	<p>Would like to discuss the timeline to upgrade computers in business labs at JDHS as computers are approximately 6 years old. Realizing that (unfortunately) not a priority. Realize that in time of budget reductions computer upgrades in general are not a priority. Still, if I don't ask for it, who will? Yearly we purchase as many computers as possible as allowed within our department budget. Does the district have an up-to-date policy? Having an on-site computer technician is a terrible idea, particularly since aging equipment is more prone to having issues.</p> <p>I feel I have taken every opportunity to make technology part of my teaching. Due to some misguided attempts and the "slowness" of a public system like "School" - I could use re-freshers in almost everything because my opportunities falter after training. These are some I refer to:  Smart-board training then no access to Smartboards; Other program training that isn't supported or available: PowerSchool - self-taught due to no training and unavailable tech-support; Final-CutPro but it takes forever to upload digital video in the lab, I don't know how to use it and I don't have any class-room video cameras anyway; Untimely updates - learned one version of iLife but don't have the same version now; difficulty finding time to learn older versions...  And OH MY LORD the PRINTER hang-ups - I hate printing. The variables of control are too many.</p> <p>The biggest "hang-up" is having large Digital Arts classes with high numbers of low-motivated and high-needs students at the end of the year. In a tech-class is an impossible drag, if the kids don't have enough initiative to use my server systems to get caught up, and they can't select videos, and I don't have the technology or knowledge to save select videos to the server. It would seem I need to be a tech-spe and know-how, to teach a basic technology class in our lab.</p> <p>Usually, I can find a simple solution to my needs to teach my standards objectives without the technology, before I can trouble-shoot at the face of budget issues, too:)</p>
<b>Mendenhall River (Elem)</b>	<p>I feel I have taken every opportunity to make technology part of my teaching. Due to some misguided attempts and the "slowness" of a public system like "School" - I could use re-freshers in almost everything because my opportunities falter after training. These are some I refer to:  Smart-board training then no access to Smartboards; Other program training that isn't supported or available: PowerSchool - self-taught due to no training and unavailable tech-support; Final-CutPro but it takes forever to upload digital video in the lab, I don't know how to use it and I don't have any class-room video cameras anyway; Untimely updates - learned one version of iLife but don't have the same version now; difficulty finding time to learn older versions...  And OH MY LORD the PRINTER hang-ups - I hate printing. The variables of control are too many.</p> <p>The biggest "hang-up" is having large Digital Arts classes with high numbers of low-motivated and high-needs students at the end of the year. In a tech-class is an impossible drag, if the kids don't have enough initiative to use my server systems to get caught up, and they can't select videos, and I don't have the technology or knowledge to save select videos to the server. It would seem I need to be a tech-spe and know-how, to teach a basic technology class in our lab.</p> <p>Usually, I can find a simple solution to my needs to teach my standards objectives without the technology, before I can trouble-shoot at the face of budget issues, too:)</p>
<b>Riverbend (Elem)</b>	No additional comments given

	Additional Comments:
<b>Thunder Mountain (HS)</b>	<p>The biggest impediment to integrating technology more is not being able to count on technology that works. It is disheartening to put a plan for planning a unit or project and then having it be a disaster because the technology we supposedly have doesn't work the way it should. Is it because of the sizeable business or organization in town that has the problems with slow and frozen computers that the school district has. Is it because of the money into supporting the networks we have? Do we need more bandwidth, server space? This is an ongoing problem that never seems to be solved effectively. I am far from an expert, but it seems to me that a lot of the district's technology decisions are not well thought out.</p> <p>I feel comfortable with some of the technology we use in the classroom; like powerpoint, but do not at all feel comfortable with google. I am not familiar with a lot of programs. I do not know how to use the Smartboard...</p> <p>I think that I can troubleshoot and help others with their basic technology needs and issues, but would like more freedom to be able to do so without having to go through someone each time for things that seem rather simple or just need a PASSWORD to fix.</p> <p>I would like to be able to feel more confident using Imovie, a creating podcasts, or integrating smartboard technology in the classroom. I would like to sit and play with the technology enough to feel confident using it during class time.</p> <p>Seven years at DZ and two at TMHS and I have never had reliable technology access or performance. I know teachers at DZ who have had problems with technology because it has never been reliable. The Lap Top carts have been the greatest frustration, near to the point of seeing them break. They are great ideas, but the reality is they are slow and temperamental. It takes for ever to open, logging in is always an issue, and you can't save half the time. Kids lose work all the time because they can't log out, or because of a myriad of other issues. On a scale of 1 to 10, my overall experience with technology in the Juneau School District over the last nine years as a teacher is a one. I can not ever recall using tech presentations without there being an issue. I can not ever recall not losing class periods dedicated to research time during projects. So I think it is important to dedicate itself to meeting the needs of a technologically oriented society through adequate technology that is reliable and works when needed.</p> <p>We have been fortunate to have Leslie A. as our tech. support person at TMHS. I appreciate all that the tech. staff does at the site and hope to see more of that in the future.</p> <p>Thanks for asking! I have been wanting to amp up my technology and I hope there is enough others to get some Prof Dev on it.</p> <p>The computer technology at Thunder Mountain has not been reliable for the three years this school has been open. About a third to half of the time a lab or give them a computer cart there are significant delays in students signing on to their accounts or accessing Word, or accessing the internet. At the very least, we need to do away with the requirement that students must sign on to accounts to access local programs on the computer.</p> <p>Talking with Phil about the current slowdown, he told me that is not reasonable to assign 30 students to go to the same website and expect it to load. It was not my particular issue I had concerns with the statement. If we, as teachers, need to assign 30 students to the same website at the same time in the district, in its quest to provide technology for our students, needs to have this capability.</p> <p>The use of technology at TMHS is an integral component of the student's daily academic activities. The problems that arise are ever present and tech in our building is paramount.</p> <p>We lose a lot of class time waiting for students to log onto the server and for the internet--even Word!--to load. It's sooooo slow! It's a huge problem.</p> <p>We can learn and learn and integrate and use what we have... but I often don't have enough resources (ie computers) for a class, or the technology is so slow that we spend 20 minutes of a 50 minute period just logging on and loading WORD -- much less trying to use some of the more sophisticated programs I am comfortable using but don't have the time to spend so much time on logging on...</p>
<b>Yaakosge Daakahidi (Alt HS)</b>	<p>Although, I feel proficient at many of these skills, I do not have the equipment available to perform tasks that are expected of me and my students.</p>





Effective teachers model and apply the National Educational Technology Standards for Students (NETS•S) as they design, implement, and assess learning experiences to engage students and improve learning; enrich professional practice; and provide positive models for students, colleagues, and the community. All teachers should meet the following standards and performance indicators. Teachers:

## 1. Facilitate and Inspire Student Learning and Creativity

Teachers use their knowledge of subject matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. Teachers:

- a. promote, support, and model creative and innovative thinking and inventiveness
- b. engage students in exploring real-world issues and solving authentic problems using digital tools and resources
- c. promote student reflection using collaborative tools to reveal and clarify students' conceptual understanding and thinking, planning, and creative processes
- d. model collaborative knowledge construction by engaging in learning with students, colleagues, and others in face-to-face and virtual environments

## 2. Design and Develop Digital-Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS•S. Teachers:

- a. design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity
- b. develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress
- c. customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources
- d. provide students with multiple and varied formative and summative assessments aligned with content and technology standards and use resulting data to inform learning and teaching

## 3. Model Digital-Age Work and Learning

Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society. Teachers:

- a. demonstrate fluency in technology systems and the transfer of current knowledge to new technologies and situations
- b. collaborate with students, peers, parents, and community members using digital tools and resources to support student success and innovation
- c. communicate relevant information and ideas effectively to students, parents, and peers using a variety of digital-age media and formats
- d. model and facilitate effective use of current and emerging digital tools to locate, analyze, evaluate, and use information resources to support research and learning

## 4. Promote and Model Digital Citizenship and Responsibility

Teachers understand local and global societal issues and responsibilities in an evolving digital culture and exhibit legal and ethical behavior in their professional practices. Teachers:

- a. advocate, model, and teach safe, legal, and ethical use of digital information and technology, including respect for copyright, intellectual property, and the appropriate documentation of sources
- b. address the diverse needs of all learners by using learner-centered strategies and providing equitable access to appropriate digital tools and resources
- c. promote and model digital etiquette and responsible social interactions related to the use of technology and information
- d. develop and model cultural understanding and global awareness by engaging with colleagues and students of other cultures using digital-age communication and collaboration tools

## 5. Engage in Professional Growth and Leadership

Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources. Teachers:

- a. participate in local and global learning communities to explore creative applications of technology to improve student learning
- b. exhibit leadership by demonstrating a vision of technology infusion, participating in shared decision making and community building, and developing the leadership and technology skills of others
- c. evaluate and reflect on current research and professional practice on a regular basis to make effective use of existing and emerging digital tools and resources in support of student learning
- d. contribute to the effectiveness, vitality, and self-renewal of the teaching profession and of their school and community

**Appendix E**  
2011 Budget Inventory Analysis: JBSD



# Budget/Inventory Analysis for E-Rate Components

The document was prepared in accordance with Section 54.508(b) of the FCC's Rules and Regulations, Chapter 1 of Title 47 of the Code of Federal Regulations.

<b>Block 1: Identification</b>			
E-Rate Year:	<b>July 1, 2011 – June 30, 2012</b>		
District or School Name:	<b>Juneau Borough School District</b>		
Prepared By:	<b>John Wahl</b>	Date:	<b>1/14/11</b>

<b>Block 2: Analysis of E-Rate Services Requested</b>	
E-Rate Service(s):	Internet Access, local and long distance phone services

<b>Block 3: Educational Technology Plan Goals Addressed by E-Rate Services</b>	
Goal(s) or Page Number(s):	Goals addressed in Technology Plan pages 1-6; Addendum 1, page 1

<b>Block 4: Evaluation of Goals</b>	
Evaluation Activities:	Evaluation listed in Technology Plan pages 24-25; additionally, the Juneau School District plans to utilize Atomic Learning's Student Technology skills assessment for evaluation of Teachers and 8 <sup>th</sup> Grade Students.

<b>Block 5: Budget Elements</b>			
Current Level of Service:	Level After E-Rate Request has been Filled:	Budget for district's share:	Planned budget source:
\$150,000	\$67,500	\$82,500	General Operating Fund

# Budget/Inventory Analysis for E-Rate Components

<b>Block 6: Analysis of Non E-Rate Eligible Requirements</b>				
<b>Block 6a: Hardware</b>				
Hardware Required:	Current Level:	New Purchases:	Budgeted Amount:	Funding Source:
Vendor owns and supplies all but a Sonic Firewall Internet Filter device	Already owned	None	\$	
<b>Block 6b: Software</b>				
Software Required:	Current Level:	New Purchases:	Budgeted Amount:	Funding Source:
none			\$	
<b>Block 6c: Professional Development (PD)</b>				
PD Required:	Current Level:	New Purchases:	Budgeted Amount:	Funding Source:
none			\$	
<b>Block 6d: Retrofitting/Electrical Upgrades</b>				
Retrofitting Required:	Electrical Upgrades Required:		Budgeted Amount:	Funding Source:
none			\$	
<b>Block 6e: Maintenance</b>				
Maintenance Required:	Current Level:	New Purchases:	Budgeted Amount:	Funding Source:
Vendor provides on their own devices; District does not require maintenance on Sonic Firewall device			\$	
<b>Block 6f: Total Non-Eligible Requirements</b>			Total Budgeted Amount:	
			\$	

Complete this document before submitting your E-Rate Form 470. Please submit this completed document to:

E-mail: [tech.plan@alaska.gov](mailto:tech.plan@alaska.gov)

FAX: 907-465-2989

Mail: Educational Technology Clerk

## Budget/Inventory Analysis for E-Rate Components

801 West Tenth Street, Suite 200, PO Box 110500, Juneau, Alaska 99811-0500

**Appendix G**

Public Service Announcement: Public Forum on Technology

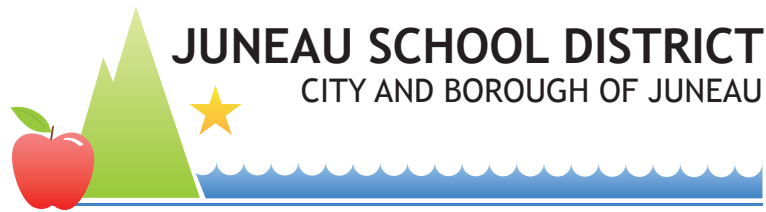
Public Forum Sign-in Sheet

Public Forum Agenda and Presentation

JBSD Permission to Publish

JBSD Elementary Network Code of Conduct

iSafe Curriculum Scope and Sequence



## **Public Service Announcement**

### **Public Forum on Technology March 4, 2011**

The community is invited to attend a *Public Forum on Technology in the Juneau School District* on Wednesday, March 9, 2011. There are two meetings to choose from:

12:00 noon in Room 154 of the Bill Ray Center, or

6:00 pm in the Thunder Mountain High School Library

The purpose of the forum is to share some of the goals that will be included in the district's next 3-year technology plan and to gather public input on:

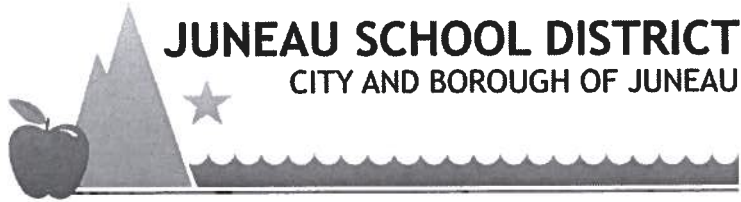
1. Student use of technology, given the uniqueness of the Juneau Community; and
2. Internet content filtering practices, both those that are required by law and those required by the JSD filtering policy.

Written input forms are available in the Announcements section of the district website at [www.juneauschools.org](http://www.juneauschools.org), or by contacting the John Wahl, Instructional Technology Coordinator, 523-1724 or [john\\_wahl@jsd.k12.ak.us](mailto:john_wahl@jsd.k12.ak.us).

Written feedback must be received by Friday, March 11, 2011. For more information see the Announcements section at [www.juneauschools.org](http://www.juneauschools.org) or call John Wahl at 523-1724.



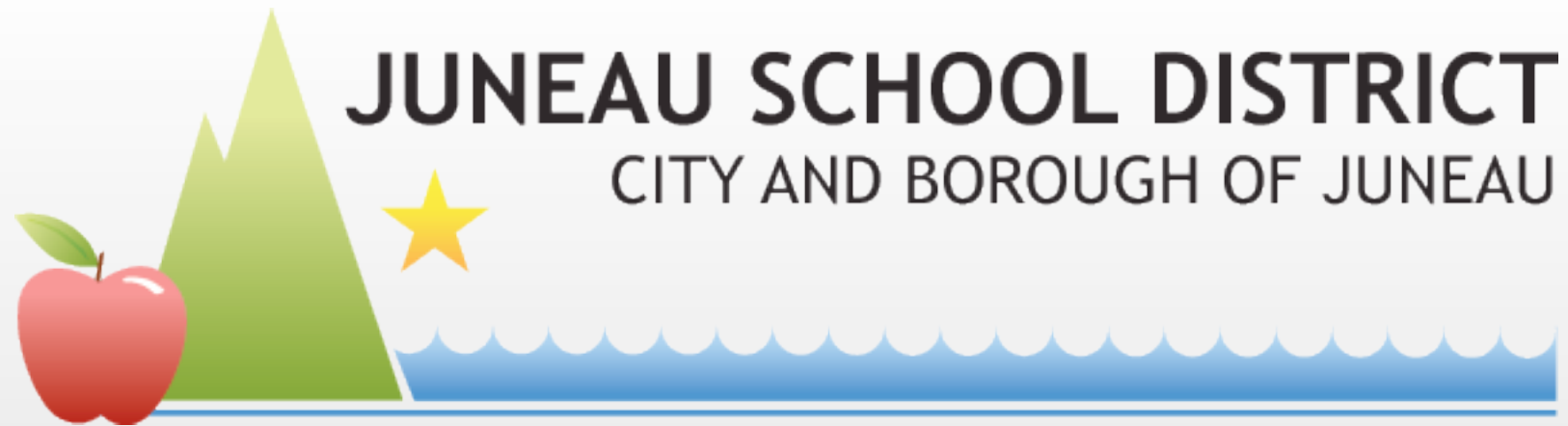
Date/Time: 3/9/11 noon - 1pm  
6pm - 7:15pm



## Public Forum on Technology ATTENDANCE SHEET

Welcome to our meeting and thank you for your participation. Please sign in.

NAME (Please Print)	EMAIL	SCHOOL OR ORGANIZATION
1. DAVID MEANS		JSD
2. Sarah Day		Juneau Empire
3. Don Williams		Greens Creek
4. Barbara Thurston		School board
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		



March 9, 2011

## Public Forum on Technology in the Juneau School District

**John Wahl:** Instructional Technology Coordinator

**Phil Gouveia:** Information Technology Supervisor

*Please take a moment to sign-in*

# Purpose

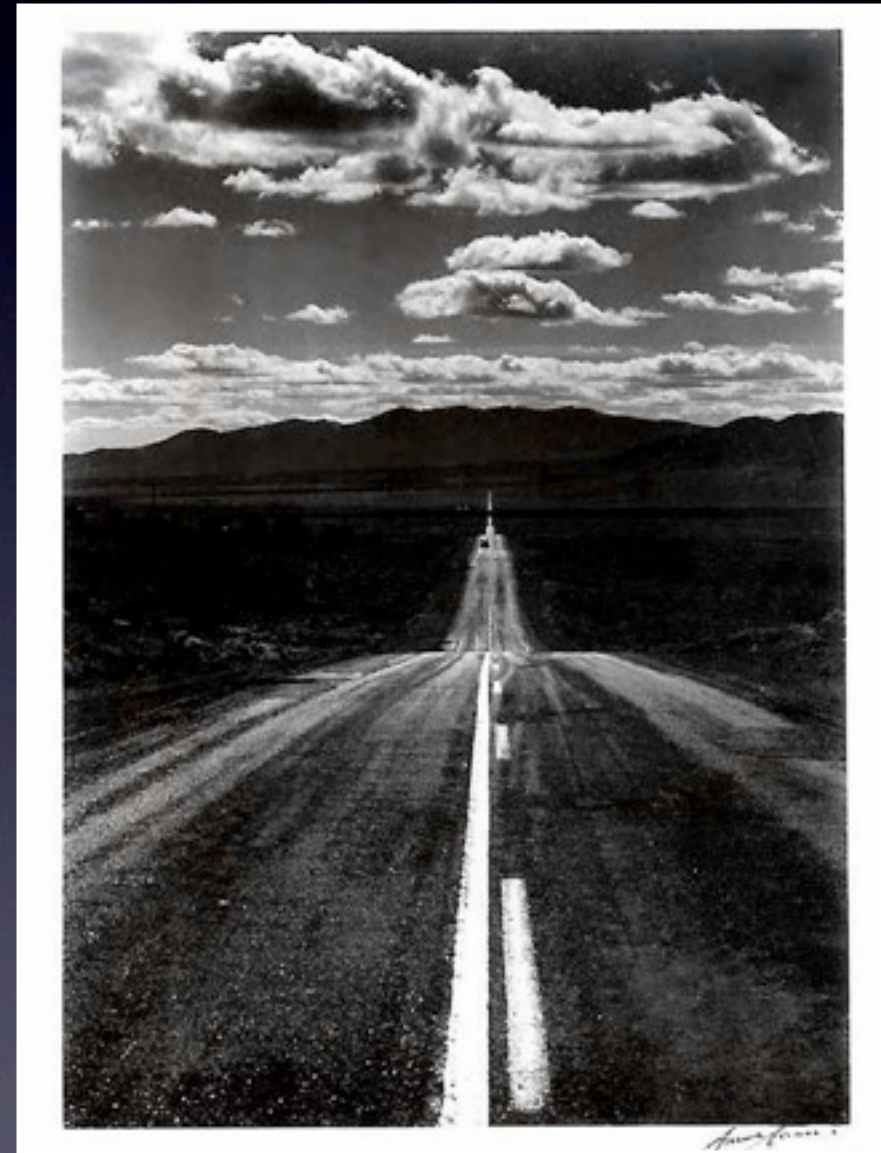
- Provide the community an opportunity to be informed and provide input on:
  - JSD Internet content filtering practices and JSD Internet safety policies
  - Goals and objectives for student use of instructional technology





# Order of Agenda

- CIPA Compliance and Content Filtering
- Questions and Feedback
- Internet Safety Policy
- Questions and Feedback
- Goals & Objectives in 3-year technology plan
- Questions and Feedback



# CIPA Compliance

## Federal Requirement

- **Technology Protection**  
**Measure:** Specific technology has been identified that will be used to **block or filter** Internet access.
- It must protect against access by adults and minors to visual depictions that are obscene, child pornography, or - with respect to use of computers with Internet access by minors - harmful to minors.
- It may be disabled for **adults** engaged in bona fide research or other lawful purposes.

## JSD Practice

- **Technology Protection**  
**Measure:** The Juneau School District uses a dedicated firewall appliance (SonicWall NAS-3500) to filter all inbound Internet traffic.
- The District subscribes to a Content Filtering Service (CFS). It provides a baseline of filtering and configuration. Obscene images are blocked by both URL and key words. District IT Staff constantly monitor and update blocking and filtering.
- A secure content filter bypass is provided for teachers and administrators to access legitimate content that might otherwise be filtered.



# Internet Filtering

- Additional Content is filtered outside the CIPA Compliance criteria
- Current procedures for content filtering
  - Requests come in to the IT Department.
  - IT Supervisor examines the site for CIPA and bandwidth constraints and makes a determination to block or allow
- Additional Content (such as social networking sites, streaming audio/video, gaming sites, and the like) are currently filtered in order to make best use of available bandwidth.
- Some content is filtered at the request on instructors.
- All adults have the ability to bypass the content filter to access legitimate content in whole group or small group settings. The bypass is not intended for student use.

# From Policy 1530: Electronic Information Networks

In addition to the blocking or filtering measures the district takes in order to comply with the Children's Internet Protection Act, the Superintendent may authorize the District's data processing department to use filtering software or other technology-based protection systems to restrict access to websites that the Superintendent determines serve no educational purpose and contain content or facilitate activities that are inappropriate for students to access or engage in at school, are substantially likely to disrupt the district's operations or educational program, or are potentially harmful to students in ways other than those contemplated by the Children's Internet Protection Act. If restrictions on access to a website are under consideration for reasons other than those described above, the decision on whether to restrict access to the site shall be submitted to the district's Committee for Re-evaluation of Educational Resources for review and the provision of a recommendation in accordance with the process established pursuant to BP 1515 and 1515R.





# Questions? Feedback?



# Internet Safety Policy

- JSD Internet Safety Policies must address the following:

- Access by minors to inappropriate matter on the Internet and the World Wide Web
- Unauthorized access, including so-called “hacking,” and other unlawful activities by minors online
- Unauthorized disclosure, use, and dissemination of personal information regarding minors
- Safety & security of minors re: e-mail, chat rooms and other forms of direct electronic communications
- Measures designed to restrict minors’ access to materials harmful to minors

[http://www.juneauschools.org/  
board/policy/1530](http://www.juneauschools.org/board/policy/1530)

[http://www.juneauschools.org/  
board/policy/1540](http://www.juneauschools.org/board/policy/1540)



## Policy 1540 - Computer Usage

The Juneau School District believes that computers and electronic communication technology are important educational tools. The district provides students, faculty and staff with access to computers and electronic information resources for educational and operational purposes.

Use of any of the district's technology is a privilege and not a right. Each student/teacher/staff member is expected to use the district's computer technology in an appropriate manner, which requires that use be efficient, ethical, and legal. The Superintendent shall develop regulations governing student and staff use of the district's computers and electronic communication resources.

Failure to abide by the regulations adopted pursuant to this policy may result in termination of the offender's privilege to use the district's computer technology and/or other disciplinary measures appropriate to the offense.

### Key Concepts:

- Use of any of the district's technology is a privilege and not a right.
- Failure to abide by the regulations in JSD policies may result in the loss of such technology privileges.

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# Policy 1540 - Computer Usage Regulation

## I. Appropriate Uses

In addition to any other uses that are not appropriate or which would violate the guidelines in these regulations, the district strictly prohibits and will not tolerate any use of its technology for activities related to the

- a) violation of any local, state or federal law;
- b) access, receipt, display, or transmittal of any pornographic or lewd information or access by minors of any material that is “harmful to minors” as defined in the Children’s Internet Protection Act;
- c) access, receipt, display or transmittal of information pertaining to the construction, manufacture or use of weapons, injurious devices, or toxic, poisonous or injurious substances except in the context of an approved educational or operational activity;
- d) participation in or organization of gambling;
- e) solicitation of or transaction of personal business or other profit-making activity, except in the context of an authorized educational activity;
- f) promotion of local, state, or national political causes or candidates;
- g) promotion of religion or religious activities;
- h) harassment or degradation of any individual or group;
- i) release of personally identifiable information about a student in violation of the district’s student records policy and regulations;
- j) unauthorized access of computer files, websites or systems, whether internal or remote or any other form of computer “hacking”.

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# Policy 1530 - Electronic Information Networks

## Regulation: Internet Procedures

### 5. In order to safeguard student access to the Internet:

- Building principals will take measures to protect the safety and security of students when using e-mail, chat rooms and other forms of direct electronic communication;
- Students shall receive instruction on appropriate Internet use, which shall include cautions against disclosing personal information in public forums or arranging to meet in person with individuals whom students have “met” only on-line in the absence of appropriate assurance that the disclosure or meeting is safe.
- The disclosure, use, and dissemination of personal information regarding students must be in compliance with Juneau School District Board Policy 5770, Parent and Student Right of Privacy and Board Policy 8330, Student Records; and
- Access to material deemed a) obscenity, b) child pornography, or c) “harmful to minors” as that term is defined in the Children’s Internet Protection Act shall be restricted by Internet filtering software or other technologies.
- The district shall monitor the online activities of students using the district’s computer network, through direct observation and/or technological means, in an effort to prevent student access of restricted materials and other inappropriate use of the district’s computer resources.

### Key Concepts:

- Safety and security of minors re: e-mail, chat, other direct electronic communication rests on Principals.
- Instruction on appropriate Internet use is a key component.
- The district can monitor online activities in an effort restrict minors’ access to material harmful to minors.

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# Questions? Feedback?

# Goals & Objectives



Juneau School District

## 2010-2014 Strategic Plan



### Student Achievement

1. Align grade level core standards in math and literacy with world-class goals in mind.
2. Implement an assessment system that informs instructional practice.
3. Engage all staff in the study and use of effective instruction and intervention strategies for all students.
4. Provide support systems to implement instructional programs with fidelity.



### Highly Qualified Staff

5. Create a coordinated professional development system that is responsive to achievement data, aligns with school and district improvement efforts, and maximizes the investment of district resources.
6. Study and practice leadership behaviors that are linked to increases in student success.
7. Strengthen our human resources strategy with improved hiring, orientation, training, feedback, and evaluation processes.



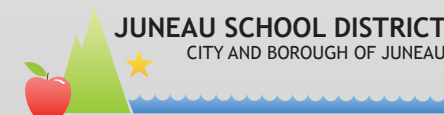
### Community Commitment

8. Strengthen community partnerships to enhance relevance in career technology programs, service learning, civics education, and across the curriculum.



### Culture of Service and Support

9. Develop and implement a service culture and efficient system of support at the District Office.



<http://www.juneauschools.org/district/2010-2014-strategic-plan>



# Goals and Objectives

## CURRICULAR AND INSTRUCTIONAL

Goal: Technology is integrated into the core Math and Literacy standards with world class goals in mind in order to raise student achievement.

### Action Steps:

A) Align the available JSD Technology resources and online resources to the adopted core Math and Literacy standards. Utilize the JSD Website as a “hub” for dissemination of resources.

B) Web 2.0 Technology tools will be utilized to collaborate and develop resources within the PLC framework for raising student achievement in mathematics, reading, and writing.

Objective: An upward trend in student achievement on the Alaska Standards Based Assessment and larger growth gains will be seen in the Measure of Academic Progress (MAP) Assessment for all students.

# JSD Technology Plan Goal

- The goal is linked to the 2010-2014 JSD Strategic Plan.
- Action step A: The core Math and Literacy standards aren't just a static document that resides on the web, but a dynamic document where resources, lessons, strategies, and digital resources can be viewed, shared, and added to over time.
- Action step B: collaboration tools such as Wiki's or shared documents (via GoogleApps) can be used to develop the Juneau School Board's goal of common formative assessments



## **Student Achievement**

1. Align grade level core standards in math and literacy with world-class goals in mind.



# Goals and Objectives

## CURRICULAR AND INSTRUCTIONAL

Goal: The current Juneau School District Technology Curriculum is revised to reflect alignment with ISTE NETs Standards

### Action Steps:

A) The Technology Curriculum Review committee will work to revise JSD Technology Curriculum during the remainder of the 2010-11 School Year with a goal for adoption and implementation during the 2011-12 School Year.

B) The revised curriculum will establish 8th grade technology literacy standards and a mechanism for performance-based assessment and reporting to students, parents, the District, and the State.

Objective: Technology integration will be a tool to improve student achievement.

# ISTE NETs

- Creativity and Innovation
- Communication & Collaboration
- Research & Information Fluency
- Critical Thinking, Problem Solving, & Decision Making
- Digital Citizenship
- Technology Operations & Concepts



## The ISTE NETS and Performance Indicators for Students (NETS-S)

### 1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- a. apply existing knowledge to generate new ideas, products, or processes
- b. create original works as a means of personal or group expression
- c. use models and simulations to explore complex systems and issues
- d. identify trends and forecast possibilities

### 2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- b. communicate information and ideas effectively to multiple audiences using a variety of media and formats
- c. develop cultural understanding and global awareness by engaging with learners of other cultures
- d. contribute to project teams to produce original works or solve problems

### 3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- a. plan strategies to guide inquiry
- b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- d. process data and report results

### 4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:

- a. identify and define authentic problems and significant questions for investigation
- b. plan and manage activities to develop a solution or complete a project
- c. collect and analyze data to identify solutions and/or make informed decisions
- d. use multiple processes and diverse perspectives to explore alternative solutions

### 5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- a. advocate and practice safe, legal, and responsible use of information and technology
- b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity
- c. demonstrate personal responsibility for lifelong learning
- d. exhibit leadership for digital citizenship

### 6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- a. understand and use technology systems
- b. select and use applications effectively and productively
- c. troubleshoot systems and applications
- d. transfer current knowledge to learning of new technologies

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<http://www.iste.org>



# ISTE's NET Standards

- **Creativity & Innovation:** demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology: create original works, use models and simulations to explore complex systems and issues...
- **Communication & collaboration:** students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others: publish and employ a variety of digital environments, communicate information and ideas effectively to multiple audiences using a variety of media and formats
- **Research & Information Fluency:** students apply digital tools to gather, evaluate, and use information: evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- **Critical Thinking, Problem Solving, and Decision Making:** students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources
- **Digital Citizenship:** students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior: practicing safe, legal, and responsible use of information and technology
- **Technology Operations and Concepts:** Students demonstrate a sound understanding of technology concepts, systems, and operations: selecting and using applications effectively and productively (technologists: choosing the right tool for the task), troubleshooting systems and applications, transfer current knowledge to learning of new technologies



# Goals and Objectives

## COMMUNICATION AND INFORMATION ACCESS

**Goal:** The Juneau School District network services and building infrastructures will be a sufficient mechanism for planning and providing access to information from local and global sources.

### Action Steps:

A) The technology support team will continually assess our long-range plans and implementations for improving network connectivity.

B) The technology support team will continue to monitor and implement systems adjustments to improve the speed and capacity for Internet access.

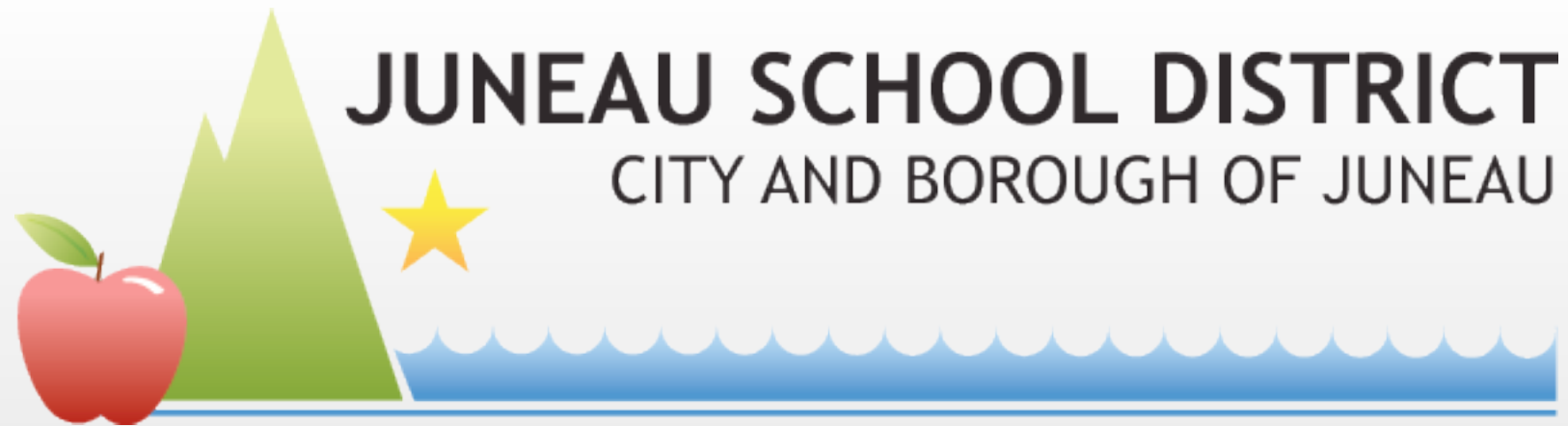
**Objective:** Through the input of the Juneau Technology Committee, determine intermediate and final benchmarks for acceptable classroom access to Internet content. (e.g. intermediate: video/audio streaming available for teachers at will in a timely matter; final: video/audio streaming available for all users)





# Questions? Feedback?

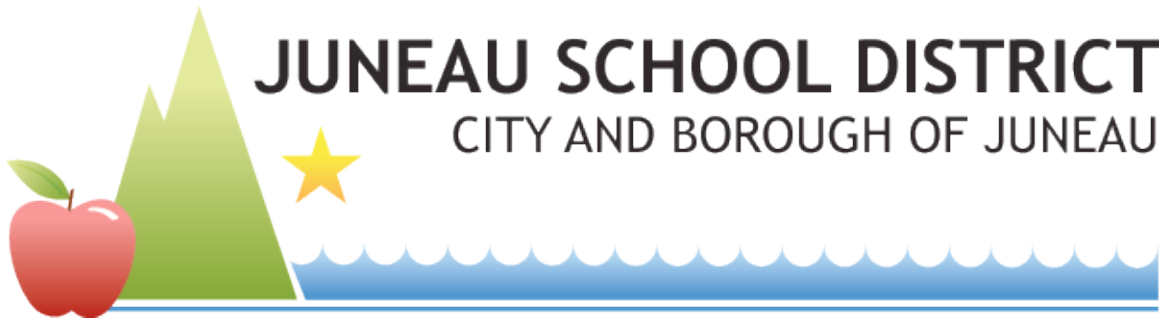
March 9, 2011



## Public Forum on Technology in the Juneau School District

*Thank you and please remember  
to fill out a feedback form.*

Also available online:  
<http://tinyurl.com/5r7zsp6>



## Using the Juneau School District Network

### What is the Juneau School District Network (JSDNet)?

Since 1994, the Juneau School District has offered students and educators access to information, communication, and collaboration through use of networked computers in each school collectively called the Juneau School District Network.

### Why use a computer network?

As educators, part of our responsibility in preparing students for the 21st Century is to provide them with the tools they will be using as adults. We believe that the use of a global information network, the Internet, is one of those tools. Through the JSDNet, your students will have access to the Internet.

### What is the Internet?

The Internet is an international network of computer networks commonly known as the “Information Superhighway.” The Internet includes thousands of databases, libraries, and resources from all over the world. These resources can be accessed through a variety of means, including Gopher, Telnet and the World Wide Web.

The Internet also provides a publishing environment that can potentially reach millions of people, as well as a fast and convenient means of communication between people all over the world via electronic mail (e-mail).

## Publishing on the Internet

The Juneau School District website publishes public information and quality student work. To see examples of work published by the Juneau School District, please talk with your child’s teacher or visit our website at [www.juneauschools.org](http://www.juneauschools.org).

#### What may be published?

- Student stories, poems, artwork, reports, etc., with signed parental permission
- Student’s first name, with signed parental permission
- Student’s photograph, with signed parental permission

#### What will **NOT** be published?

- Student’s phone number
- Student’s last name
- Student’s e-mail address
- Student’s street address or box number

### Standards for publishing

- Documents must conform to school board policies and established school guidelines.
- Documents must be edited and approved by a teacher before publication.
- Documents will not contain objectionable material or point directly or indirectly to objectionable material.

If you have any questions or concerns about this, please talk with your child’s teacher. Thank you for helping us provide responsible computer network and Internet use for your child.

# JSDNet Permission Form

**Please review the attached “JSDNet Code of Conduct” with your child and signify that you have done so by initialing all boxes that apply and signing this form.** If you do not wish your child to use the Internet, please advise your child.

## JSDNet Code of Conduct

I, as a PARENT, understand and support the teaching of the responsible use of the JSDNet to my child. I expect my child to follow instructions and to use the system only as directed.

Parent Initials

I, as a STUDENT, understand that my use of the JSDNet will be dependent upon my responsible use of the network.

Student Initials

## Electronic Mail Permission

Yes

No

I give my child permission to have an e-mail account.

## Permission to Publish on the Internet

I grant permission for my child's **work** to be published.

I grant permission for my child's **first name** to be published.

I grant permission for my child's **photograph** to be published.

Please sign and return this page to your child's teacher.

\_\_\_\_\_  
Parent Name (please print)

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Student Name (please print)

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date



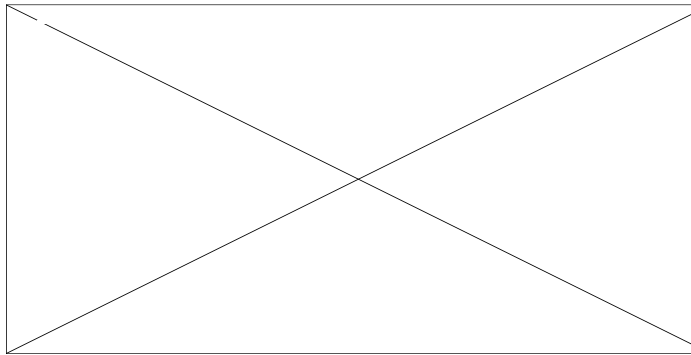
# Elementary Network Code of Conduct

## RIGHTS

---

### Students have the right to:

- use technology in their learning.
- learn to use a wide range of tools in technology.
- access resources in research.
- exchange information world-wide with other users.



## RESPONSIBILITIES

---

### Students have the responsibility to:

- use school equipment carefully and respectfully.
- learn to use the network properly.
- follow all school, district, state and federal rules.
- use the Internet only under staff supervision, and only in the approved areas.
- report any student who breaks the rules.

## UNACCEPTABLE USES

---

### Students may not:

- damage or disrupt equipment or the system.
- interfere with another person's use of the equipment.
- waste paper by printing unnecessary pages.
- use the equipment without staff permission and/or supervision.
- read someone's mail without permission.
- use someone else's account or address.
- use foul language.
- send offensive messages.
- allow offensive materials to enter the school network.
- go into areas which are "off-limits."

**If at any time a student is unsure about her/his use of the network system, s/he should ask a staff member for help immediately!**

# i-SAFE CURRICULUM SCOPE 2008-09

## Elementary Grades K - 5

Scope of curriculum – i-SAFE materials are available in topic modules to provide the teacher with flexibility in creating a program of instruction that best suits the needs of each unique class. Therefore, the sequence of topics is not critical. For the early elementary grades, however, it is recommended that lessons and activities on Cyber Community Citizenship be implemented first to provide a better basis of understanding of the abstract concept of Cyberspace.

**How to use this guide:** Find your grade level in the following pages to view available lessons including grade-specific and multi-grade options.

### Kindergarten

#### **Module: Cyber Community Issues**

- **The Cyber Community**  
The i-SAFE character, i-Buddy, is used to introduce the abstract concept of a community on the Internet through interactive, hands-on activities. Strategy introduced: Students should have adult assistance when using the Internet.

#### **Module: Online Personal Safety**

- **Learn About Online Personal Safety**  
The i-SAFE character, i-Buddy, is used to introduce the abstract concept of safety while online and reinforce that students should have adult assistance when using the Internet.
- **Movement and Music (7 mini lessons)** (*multi-grade K – 2*)  
A collection of songs available for download or an audio CD with accompanying movement activity plans for teacher use provides an active mode for reinforcement of concepts learned in core curriculum.
- **WORKBOOK: In Sync with Internet Safety Series: Diving into Internet Safety** (*multi-grade K – 2*)  
**For purchase only** – This option to traditional lessons covers personal safety in the cyber community topics in an age-appropriate workbook format. Includes teachers' guide

#### **Module: Cyber Security**

- **i-Buddy Learns About a New Kind of Virus**  
The i-SAFE character, i-Buddy, is used to introduce the abstract concept of the computer virus and reinforce that students should have adult assistance when using the Internet.
- **Build a Cyber Security Bulletin Board** (*multi-grade elementary*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

## Scope – Grade 1

### Module: Cyber Community

- **Our Cyberspace Community**  
The i-SAFE character, i-Buddy, is used to introduce the abstract concept of a community on the Internet and are developed through analogies to the real community.
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### Module: Online Personal Safety

- **Safety in Personal Information**  
Grade K concepts built upon by introducing new terminology and engaging in discussions that target age-appropriate strategies for uncomfortable online situations.
- **Movement and Music (7 mini lessons)** (*multi-grade K – 3*)  
A collection of songs available for download or an audio CD with accompanying movement activity plans for teacher use provides an active mode for reinforcement of concepts learned in core curriculum.
- **WORKBOOK: In Sync with Internet Safety Series: Diving into Internet Safety** (*multi-grade K – 2*)  
**For purchase only** – This option to traditional lessons covers personal safety in the cyber community topics in an age-appropriate workbook format. Includes teachers' guide

### Module: Cyber Security

- **Email Safety Basics**  
Introduces the concept that keeping young children safe requires having the help of a responsible adult when opening or sending email
- **Build a Cyber Security Bulletin Board** (*multi-grade elementary*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

## Scope – Grade 2

### Module: Cyber Community Issues

- **Cyber Citizenship**  
Concepts revolve around rules of communities and analogies to the real world.
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### Module: Online Personal Safety

- **Online Personal Safety**  
Concepts focus on the importance of rules and laws in keeping people safe.
- **Online Behavior with Netiquette**  
Learning activities help student learn about how to use netiquette to have more positive online experiences.
- **Movement and Music (7 mini lessons)** (*multi-grade K – 3*)  
A collection of songs available for download or an audio CD with accompanying movement activity plans for teacher use provides an active mode for reinforcement of concepts learned in core curriculum.
- **WORKBOOK: In Sync with Internet Safety Series: Diving into Internet Safety** (*multi-grade K – 2*)  
**For purchase only** – This option to traditional lessons covers personal safety in the cyber community topics in an age-appropriate workbook format. Includes teachers' guide

### Module: Cyber Security

- **Cyber Security and Email**  
Grade 1 concepts are introduced and built upon by introducing expanding explanations, vocabulary, and age-appropriate computer virus prevention techniques.
- **Build a Cyber Security Bulletin Board** (*multi-grade elementary*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

## Scope – Grade 3

### Module: Cyber Community Issues

- **Places in Cyberspace**  
Grade 2 concepts are reviewed and built upon by introducing new terminology and concepts such as “URL”, strategies to exit Web sites and how the terms “appropriate and inappropriate” apply to Internet use.
- **Citizenship and Safety** (*multi-grade 3 – 4*)  
Cyber community concepts are expanded upon with a focus on cyber citizenship and safety rules
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school’s acceptable use policy (AUP) as a teaching tool.

### Module: Online Personal Safety

- **Safety for the Interactive Web**  
Online personal safety concepts are explained in terms of engagement in newer interactive technologies.
- **Movement and Music (7 mini lessons)** (*multi-grade K – 3*)  
A collection of songs available for download or an audio CD with accompanying movement activity plans for teacher use provides an active mode for reinforcement of concepts learned in core curriculum.
- **Cyber Bullying**  
The concepts of cyber bullying as compared to kindness online are introduced through a focus of relating them to behaviors in the physical world. Netiquette is introduced. Students identify courses of action and resources.
- **WORKBOOK: In Sync with Internet Safety Series: Online Safari** (*multi-grade 3 – 4*)  
**For purchase only** – This option to traditional lessons engages learners with analogies of online personal safety to safety when traveling on safari in an age-appropriate workbook format. Includes teachers' guide

### Module: Cyber Predator Identification

- **Cyber Predator Awareness**  
An age-appropriate, basic introduction to a predator’s grooming process, focusing on terminology

### Module: Cyber Security

- **Cyber Security and Email attachments**  
Grade 2 concepts are introduced and built upon by introducing expanding explanations, vocabulary, and age-appropriate computer virus prevention techniques.
- **Spam, Scams and Phishing** (*multi-grade 3 – 5*)  
An introduction to spam, dangers associated with spam and associated safety rules.
- **Build a Cyber Security Bulletin Board** (*multi-grade elementary*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

### Module: Intellectual Property

For grades 3 and 4, i-SAFE offers 2 core units on Intellectual property comprised of mini-lessons/activities to facilitate a variety of implementation strategies and time frames.

- **UNIT: Intellectual Property (5 lessons)**  
Includes an overview of concepts, vocabulary, introduction piracy, information on how to cite a source and a build a bulletin board activity; Includes PowerPoint and html activities  
**Beat Street Assembly Activities** (included in Intellectual Property Unit)  
Classroom activities that support concepts learned in the i-SAFE Beat Street Assembly.
- **UNIT: Creativity in the Classroom: Creative Ownership and Copyright (6 lessons)**  
Includes concepts and vocabulary that revolve around copyrights and recognizing how copyright affects one’s own work. Includes PowerPoint lesson and activities that integrate creative projects

## Scope – Grade 4

### Module: Cyber Community Issues

- **Netiquette in the Cyber Community**  
Grade 3 concepts are reviewed and built upon, focusing on netiquette usage, age-appropriate strategies to handle inappropriate email and an examination of the concept of “looping.”
- **Citizenship and Safety** (*multi-grade 3 – 4*)  
Cyber community concepts are expanded upon with a focus on cyber citizenship and safety rules
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school’s acceptable use policy (AUP) as a teaching tool.

### Module: Online Personal Safety

- **Keeping it Personal**  
Focuses on how to effectively manage personal information online
- **Text Messaging Safety** (*multi-grade 4 – 6*)  
Introduction to concepts specific text messaging and its associated safety strategies (including cell phones)
- **Cyber Bullying**  
The concepts of cyber bullying as compared to kindness online are explored through a focus of relating them to behaviors in the physical world. Netiquette is introduced. Students identify courses of action and resources.
- **WORKBOOK: In Sync with Internet Safety Series: Online Safari** (*multi-grade 3 – 4*)  
**For purchase only** – This option to traditional lessons engages learners with analogies of online personal safety to safety when traveling on safari in an age-appropriate workbook format. Includes teachers' guide

### Module: Cyber Predator Identification

- **Cyber Predator Awareness**  
An age-appropriate, basic introduction to a predator’s grooming process, focusing on terminology

### Module: Cyber Security

- **Malicious Code in Email**  
Covers e-mail forwarding as it is related to viruses and e-mail and Reinforces age-appropriate computer virus prevention techniques
- **Spam, Scams and Phishing** (*multi-grade 3 – 5*)  
An introduction to spam, dangers associated with spam and associated safety rules.
- **Build a Cyber Security Bulletin Board** (*multi-grade elementary*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

### Module: Intellectual Property

- **UNIT: Intellectual Property (5 lessons)**  
Includes an overview of concepts, vocabulary, introduction piracy, information on how to cite a source and a build a bulletin board activity; Includes PowerPoint and html activities  
**Beat Street Assembly Activities** (included in Intellectual Property Unit)  
Classroom activities that support concepts learned in the i-SAFE Beat Street Assembly.
- **UNIT: Creativity in the Classroom: Creative Ownership and Copyright (6 lessons)**  
Includes concepts and vocabulary that revolve around copyrights and recognizing how copyright affects one’s own work. Includes PowerPoint lesson and activities that integrate creative projects
- **UNIT: i-Creatm (19 lessons/activities PLUS workbook)** (*multi-grade upper elementary*)  
Comprehensively covers concepts related to patents, trademarks and copyrights

## Scope – Grade 5

### Module: Cyber Community Issues

- **Cyber Community Citizenship**  
The Internet community is compared to the physical community, highlighting their similarities and the ways people interact within them.
- **Inappropriate Websites**  
An examination of the concept that the Internet is part of the cyber community, which contains both appropriate and inappropriate places to visit, and provides techniques to manage web surfing.
- **Safe Website Design** (*multi-grade 5 – 8*)  
Learners develop a comprehensive understanding of safety tips to remember when designing and building their own Websites.
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### >Sub-Topic: Culture, Ethics and the Internet

- **Unit on CD: Our Cultural Awareness Series 1: Hawaii**  
**For purchase only** – 3 lessons with accompanying songs relate typical themes and stories of Hawaiian culture/heritage to issues of cyber safety and responsibility. Each lesson integrates Hawaiian words, phrases, stories, cultural activities, specially written songs, and a youth empowering enrichment activity to connect safety and behavioral concepts of the physical world to understanding of meaningful Internet usage.

### Module: Online Personal Safety

- **UNIT: Online Personal Safety (4 lessons)**  
Includes concepts surrounding the protection of personal Information online, identity theft and an introduction to a predator's grooming process
- **Play it Safe Online** (*multi-grade 5 – 8*)  
PowerPoint facilitated lesson that explores the importance of safeguarding one's personal information online.
- **WORKBOOK: In Sync Series: Managing Personal Information Online** (*multi-grade 5 – 8*)  
**For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of the concepts surrounding the necessity and techniques for managing one's online personal information in a workbook format. Includes teachers' guide

### >Sub-Topic: Cyber Bullying

- **Cyber Bullying**  
Students investigate and identify key concepts associated with cyber bullying and learn strategies to avoid it.

### >Sub-Topic: Web 2.0 Technologies

- **Text Messaging Safety** (*multi-grade 4 – 6*)  
Introduction to concepts specific text messaging and its associated safety strategies (including cell phones)
- **Web Logs: A Positive Approach to Blogging** (*multi-grade 5 – 8*)  
A complimentary lesson/activity to the core Personal Safety Unit; the concepts of personal web logs (blogging) and relevant safety issues are introduced.

### > Sub-Topic: Review Concepts with Math Activities

- **Introduction to Graphs** (*multi-grade 5 – 8*)  
Learners will continue developing their understanding of online dangers through a math-themed lesson aimed at teaching basic graphing skills.
- **Graphing** (*multi-grade 5 – 8*)  
Learners continue to develop an understanding of online dangers through a math-themed lesson aimed at using graphing skills. Students will learn/reinforce three basic graph types along with their primary functions: line graph, bar graph, and circle graph.

## Scope – Grade 5 continued

### Module: Cyber Predator Identification

- **Cyber Predator Awareness** (*multi-grade 3 – 5*)  
Age-appropriate, basic introduction to a predator's grooming process, focusing on terminology
- **Online Predators and the Grooming Process**  
PowerPoint facilitated lesson age-appropriately helps students learn to identify and comprehend basic components of an online predator's grooming process.

### Module: Cyber Security

- **Handshake Activity: Malicious code**  
Group activity that illustrates an analogy of how malicious code is spread
- **Cyber Security Basics**  
Overview/examination of basic cyber security issues presented by malware
- **Spam, Scams and Phishing** (*multi-grade 3 – 5*)  
An introduction to spam, dangers associated with spam and associated safety rules.
- **Build a Cyber Security Bulletin Board** (*multi-grade 1 – 5*)  
Activity-based lesson that engages students in an activity to explore the concepts of cyber security and share what they have learned.

### Module: Intellectual Property

- **UNIT: Intellectual Property (6 lessons)**  
A selection of lessons and activities provide students with opportunities to investigate and identify key concepts associated with responsible use on the Internet, focusing on attributes and types of materials, definitions of copyright and plagiarism, and techniques to avoid IP theft and plagiarism.  
**Beat Street Assembly Activities** (included in Intellectual Property Unit)  
Classroom activities that support concepts learned in the i-SAFE Beat Street Assembly.
- **UNIT: Creativity in the Classroom: Creative Ownership and Copyright (5 lessons)**  
Includes concepts and vocabulary that revolve around copyrights and recognizing how copyright affects one's own work. Includes PowerPoint lesson and activities that integrate creative projects.
- **UNIT: i-Creatm (19 lessons/activities PLUS workbook)** (*multi-grade upper elementary*)  
Comprehensively covers concepts related to patents, trademarks and copyrights

### Module: Effective Outreach

#### Sub-Topic: Review Concepts with Literacy Activities

- **Integrated Literacy Review: Internet Safety Focus – Cyber Community**  
Enables review and reinforcement of the safety concepts associated with interaction and citizenship in the cyber community through basic language arts activities

# i-SAFE CURRICULUM SCOPE 2008-09 (Middle Grades)

## Grade 6

### Module: Cyber Community Issues

- **Cyber Community Citizenship**  
An examination of the roles of cyber citizens in the cyber community
- **Safe Website Design** (*multi-grade 5 – 8*)  
Learners develop a comprehensive understanding of safety tips to remember when designing and building their own Websites.
- **Negative Networking: A Look at Gangs Online** (*multi-grade 6 – 8*)  
An investigation of how gang culture of the physical world is permeating Cyberspace
- **Safety in Online Gaming** (*multi-grade 6 – 8*)  
An examination of the terms and concepts related to safety challenges in online gaming
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### >Sub-Topic: Culture, Ethics, and the Internet

- **Unit on CD: Our Cultural Awareness Series 1: Hawaii**  
**For purchase only** – 3 lessons with accompanying songs relate typical themes and stories of Hawaiian culture/heritage to issues of cyber safety and responsibility. Each lesson integrates Hawaiian words, phrases, stories, cultural activities, specially written songs, and a youth empowering enrichment activity to connect safety and behavioral concepts of the physical world to understanding of meaningful Internet usage.

### Module: Online Personal Safety

- **UNIT: Online Personal Safety (4 lessons)**  
Includes concepts surrounding the protection of personal Information online, identity theft and an introduction to a predator's grooming process
- **UNIT 1: Online Identity and You (5 lessons)** (*multi-grade 6 – 8*)  
First series of lessons to provides an in-depth examination of what "identity" means, the risks that youth face when revealing too much personal information online and how to use the services provided by identity.net to protect identity while engaging in online activities.
- **Play it Safe Online** (*multi-grade 5 – 8*)  
PowerPoint facilitated lesson that explores the importance of safeguarding personal information online.
- **Online Shopping** (*multi-grade 6 – 8*)  
Develops understanding of the safety and security risks associated with Internet shopping and how to take preventative measures while shopping online.
- **WORKBOOK: In Sync Series: Managing Personal Information Online** (*multi-grade 5 – 8*)  
**For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of the concepts surrounding the necessity and techniques for managing one's online personal information in a workbook format. Includes teachers' guide
- **WORKBOOK: In Sync Series: Substance Abuse issues in an Online Culture** (*multi-grade 6 – 8*)  
**For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of youth drug abuse and online implications in a workbook format. Includes teachers' guide

### >Sub-Topic: Cyber Bullying

- **Cyber Bullying**  
Students age-appropriately investigate and identify key concepts associated with cyber bullying and learn strategies to avoid it.
- **WEBCAST – Cyber Harassment: Online Bullying and Stalking** (*multi-grade 6 – 8*)  
This investigation of cyber-harassment issues focuses on definitions of bullying and stalking as they apply to the Internet, rules, laws, and consequences, and the Ryan Halligan story.
- **WORKBOOK: In Sync with Internet Safety Series: Cyber Bullying Prevention – Cyber Citizenship and Netiquette Sense** (*multi-grade 6 – 8*) **For purchase only** – This option to traditional lessons provides a complete examination of cyber bullying and prevention techniques in a workbook format. Includes teachers' guide

### >Sub-Topic: Web 2.0 Technologies

- **A Web 2.0 World** (*multi-grade 6 – 8*)  
Learners explore the risks and benefits of interactive technologies described as "Web 2.0."
- **Text Messaging Safety** (*multi-grade 4 – 6*)  
Introduction to concepts specific text messaging and its associated safety strategies (including cell phones)



## Scope – Grade 6 continued – Online Personal Safety>Sub-Topic: Web 2.0 Technologies

- **Web Logs: A Positive Approach to Blogging** (*multi-grade 5 – 8*)  
The concepts of personal web logs (blogging) and relevant safety issues are introduced.
- **Social Networking** (*multi-grade 6 – 8*)  
An investigation of the current trends in usage of social-networking sites, safety strategies for social networking, and the positive uses of these activities
- **Your Digital Footprint** (*multi-grade 6 – 8*)  
Defines the term “digital footprint” and enables understanding of how online actions impact searchable personal information.

### Sub-topic: Review Concepts with Math Activities

- **Introduction to Graphs** (*multi-grade 5 – 8*)  
Internet safety review with through a math-themed lesson (basic graphs)  
**Graphing** (*multi-grade 5 – 8*)  
Internet safety review with through a math-themed lesson (graphs)
- **Survey and Statistics** (*multi-grade 6 – 8*)  
Internet safety review with through a math-themed lesson (survey and statistics)
- **Word Problems and Algebraic Equations** (*multi-grade 6 – 8*)  
Internet safety review with through a math-themed lesson (basic algebra)

### Module: Cyber Predator Identification

- **Strangers Online**  
Learners develop a basic understanding of the concept that anyone met online is a stranger with the potential to do harm.
- **Online Predators and the Grooming Process**  
PowerPoint facilitated lesson age-appropriately helps students learn to identify and comprehend basic components of an online predator’s grooming process.
- **Avoiding Online Predators** (*multi-grade 6-8*)  
PowerPoint facilitated lesson helps students age-appropriately learn to identify risky behaviors related to involvement with online predators.
- **WORKBOOK: In Sync with Internet Safety Series: A Common Sense Guide to Strangers Online** (*multi-grade 6– 8*) **For purchase only** – covers the topic of cyber predators in a workbook format. Includes teachers' guide

### Module: Cyber Security

- **UNIT: Cyber Security (4 lessons)**  
Comprehensively covers security-related e-mail protocols and the risks of spyware and spam scams
- **Computer Security Basics**  
Develops understanding of the online security issues presented by malware

### Module: Intellectual Property

- **UNIT: Intellectual Property (6 lessons)**  
The introduction of key concepts associated with responsible use on the Internet, focusing on attributes and types of materials, definitions of copyright and plagiarism, and techniques to avoid IP theft and plagiarism.
- **Cite Your Source**  
Lesson to reinforce techniques to cite sources for school or personal work
- **UNIT: i-Creatm (20 lessons/activities PLUS workbook)** (*multi-grade middle school*)  
Comprehensively covers concepts related to patents, trademarks and copyrights

### Module: Effective Outreach

#### >Sub-Topic: Review Concepts with Literacy Activities

- **Integrated Literacy Review: Internet Safety Focus – Cyber Security**  
Enables review and reinforcement of cyber security concepts through basic language arts activities.

### Module: Media Literacy

- **UNIT 1 – Introduction to Media Literacy (4 lessons)**  
Not just about the Internet! First in a series, this unit provides a complete introduction to media literacy

## Scope – Grade 7

## **Module: Cyber Community Issues**

- **Cyber Community Citizenship**  
An examination of the roles of cyber citizens in the cyber community
- **Safe Website Design** (*multi-grade 5 – 8*)  
Learners develop a comprehensive understanding of safety tips to remember when designing and building their own Websites.
- **Negative Networking: A Look at Gangs Online** (*multi-grade 6 – 8*)  
An investigation of how gang culture of the physical world is permeating Cyberspace
- **Safety in Online Gaming** (*multi-grade 6 – 8*)  
An examination of the terms and concepts related to safety challenges in online gaming
- **Legal Trends in Cyber Safety and Security** (*multi-grade 7 – 8*)  
An investigation of current legal trends that concern Internet usage
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### **>Sub-Topic: Culture, Ethics, and the Internet**

- **Unit on CD: Our Cultural Awareness Series 1: Hawaii**  
**For purchase only** – 3 lessons with accompanying songs relate typical themes and stories of Hawaiian culture/heritage to issues of cyber safety and responsibility.

## **Module: Online Personal Safety**

- **UNIT: Online Personal Safety (4 lessons)**  
Includes concepts surrounding the protection of personal Information online, identity theft and an introduction to a predator's grooming process
- **UNIT 1: Online Identity and You (5 lessons)** (*multi-grade 6 – 8*)  
First series of lessons to provides an in-depth examination of what "identity" means, the risks that youth face when revealing too much personal information online and how to use the services provided by identity.net to protect identity while engaging in online activities.
- **Play it Safe Online** (*multi-grade 5 – 8*)  
PowerPoint facilitated lesson that explores the importance of safeguarding one's personal information online.
- **Safe Screen Names**  
Lesson and activity to reinforce how to create safe screen names
- **Online Shopping** (*multi-grade 6 – 8*)  
Develops understanding of the safety and security risks associated with Internet shopping and how to take preventative measures while shopping online.
- **WORKBOOK: In Sync Series: Managing Personal Information Online** (*multi-grade 5 – 8*)  
**For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of the concepts surrounding the necessity and techniques for managing one's online personal information in a workbook format. Includes teachers' guide
- **WORKBOOK: In Sync Series: Substance Abuse issues in an Online Culture** (*multi-grade 6 – 8*)  
**For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of youth drug abuse and online implications in a workbook format. Includes teachers' guide

### **>Sub-Topic: Cyber Bullying**

- **Cyber Bullying**  
Students age-appropriately investigate and identify key concepts associated with cyber bullying and learn strategies to avoid it.
- **WEBCAST – Cyber Harassment: Online Bullying and Stalking** (*multi-grade 6 – 8*)  
This investigation of cyber-harassment issues focuses on definitions of bullying and stalking as they apply to the Internet, rules, laws, and consequences, and the Ryan Halligan story.
- **WORKBOOK: In Sync with Internet Safety Series: Cyber Bullying Prevention – Cyber Citizenship and Netiquette Sense** (*multi-grade 6 – 8*) **For purchase only** – This option to traditional lessons provides a complete examination of cyber bullying and prevention techniques in a workbook format. Includes teachers' guide

### **>Sub-Topic: Web 2.0 Technologies**

- **A Web 2.0 World** (*multi-grade 6 – 8*)  
Learners explore the risks and benefits of interactive technologies described as "Web 2.0."

## **Scope – Grade 7 continued – Online Personal Safety>Sub-Topic: Web 2.0 Technologies**

- **Web Logs: A Positive Approach to Blogging** (*multi-grade 5 – 8*)  
The concepts of personal web logs (blogging) and relevant safety issues are introduced.
- **Social Networking** (*multi-grade 6 – 8*)  
An investigation of the current trends in usage of social-networking sites, safety strategies for social networking, and the positive uses of these activities
- **Your Digital Footprint** (*multi-grade 6 – 8*)  
Defines the term “digital footprint” and enables understanding of how online actions impact searchable personal information.

#### >Sub-topic: Internet Safety Review Concepts with Math Activities

- **Introduction to Graphs** (*multi-grade 5 – 8*)  
**Graphing** (*multi-grade 5 – 8*)
- **Survey and Statistics** (*multi-grade 6 – 8*)
- **Word Problems and Algebraic Equations** (*multi-grade 6 – 8*)

#### Module: Cyber Predator Identification

- **Grooming Process Awareness** (*multi-grade 7-8*)  
Learners develop a basic understanding of a cyber predator’s grooming process.
- **Online Predators and the Grooming Process**  
PowerPoint facilitated lesson age-appropriately helps students learn to identify and comprehend basic components of an online predator’s grooming process.
- **Avoiding Online Predators** (*multi-grade 6-8*)  
PowerPoint facilitated lesson helps students learn to identify risky behaviors related to involvement with online predators.
- **Examining “Willing Participation”** (*multi-grade 7-8*)  
Develops understanding of the safety risks posed by pursuing inappropriate online relationships
- **WORKBOOK: In Sync with Internet Safety Series: A Common Sense Guide to Strangers Online** (*multi-grade 6– 8*) **For purchase only** – covers the topic of cyber predators in a workbook format. Includes teachers' guide

#### Module: Cyber Security

- **UNIT: Cyber Security (5 lessons)**  
Comprehensively covers security-related e-mail protocols and the risks of spyware and spam scams
- **Spyware Risks**  
Individual lesson develops understanding of the online security issues presented by spyware.
- **Virus Recognition and Action**  
Individual lesson develops understanding of how to prevent online security issues presented by malware.
- **National Student Watch**  
Learners develop a comprehensive understanding of their school's action or disaster plan in response to homeland security threats, and the means of relaying information concerning threats.
- **Homeland Security**  
Learners learn terminology and concepts related to potential national security threats facilitated by the Internet.

#### Module: Intellectual Property

- **UNIT: Intellectual Property (6 lessons)**  
Lessons focusing on the various aspects of proper and improper online intellectual property usage.
- **UNIT: i-Creatm (20 lessons/activities PLUS workbook)** (*multi-grade middle school*)  
Comprehensively covers concepts related to patents, trademarks and copyrights

#### Module: Effective Outreach

##### Sub-Topic: Review Concepts with Literacy Activities

- **Integrated Literacy Review: Internet Safety Focus – Personal Information**  
Enables review and reinforcement of online personal safety concepts through basic language arts activities.

#### Module: Media Literacy

- **UNIT 1 – Introduction to Media Literacy (4 lessons)**  
Not just about the Internet! First in a series, this unit provides a complete introduction to media literacy.

## Scope – Grade 8

## **Module: Cyber Community Issues**

- **Citizenship in the Cyber Community**  
The Internet community is compared to the physical community, with a focus on evaluating the appropriateness of Web sites considering age group, intended use, and reliability of information.
- **Safe Website Design** (*multi-grade 5 – 8*)  
Learners develop a comprehensive understanding of safety tips to remember when designing and building their own Websites.
- **Negative Networking: A Look at Gangs Online** (*multi-grade 6 – 8*)  
An investigation of how gang culture of the physical world is permeating Cyberspace
- **Safety in Online Gaming** (*multi-grade 6 – 8*)  
An examination of the terms and concepts related to safety challenges in online gaming
- **Legal Trends in Cyber Safety and Security** (*multi-grade 7 – 8*)  
An investigation of current legal trends that concern Internet usage
- **Acceptable Use Policies Unit** (*multi-grade all*)  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.

### **>Sub-Topic: Culture, Ethics, and the Internet**

- **Unit on CD: Our Cultural Awareness Series 1: Hawaii**  
**For purchase only** – 3 lessons with accompanying songs relate typical themes and stories of Hawaiian culture/heritage to issues of cyber safety and responsibility.

## **Module: Online Personal Safety**

- **UNIT: Online Personal Safety (4 lessons)**  
Includes concepts surrounding the protection of personal Information online, identity theft and an introduction to a predator's grooming process
- **UNIT 1: Online Identity and You (5 lessons)** (*multi-grade 6 – 8*)  
First series of lessons to provides an in-depth examination of what "identity" means, the risks that youth face when revealing too much personal information online and how to use the services provided by identity.net to protect identity while engaging in online activities.
- **Play it Safe Online** (*multi-grade 5 – 8*)  
PowerPoint facilitated lesson that explores the importance of safeguarding one's personal information online.
- **Safe Screen names**  
Lesson and activity to reinforce how to create safe screen names
- **Online Shopping** (*multi-grade 6 – 8*)  
Develops understanding of the safety and security risks associated with Internet shopping and how to take preventative measures while shopping online.
- **WORKBOOK: In Sync Series: Managing Personal Information Online** (*multi-grade 5 – 8*) **For purchase only** – This option to traditional lessons engages learners with a comprehensive examination of the concepts surrounding the necessity and techniques for managing one's online personal information in a workbook format. Includes teachers' guide

### **>Sub-Topic: Cyber Bullying**

- **Cyber Bullying**  
Students age-appropriately investigate and identify key concepts associated with cyber bullying and learn strategies to avoid it.
- **WEBCAST – Cyber Harassment: Online Bullying and Stalking** (*multi-grade 6 – 8*)  
This investigation of cyber-harassment issues focuses on definitions of bullying and stalking as they apply to the Internet, rules, laws, and consequences, and the Ryan Halligan story.
- **WORKBOOK: In Sync with Internet Safety Series: Cyber Bullying Prevention – Cyber Citizenship and Netiquette Sense** (*multi-grade 6 – 8*) **For purchase only** – This option to traditional lessons provides a complete examination of cyber bullying and prevention techniques in a workbook format. Includes teachers' guide

### **>Sub-Topic: Web 2.0 Technologies**

- **A Web 2.0 World** (*multi-grade 6 – 8*)  
Learners explore the risks and benefits of interactive technologies described as "Web 2.0."
- **Web Logs: A Positive Approach to Blogging** (*multi-grade 5 – 8*)  
The concepts of personal web logs (blogging) and relevant safety issues are introduced.
- **Social Networking** (*multi-grade 6 – 8*)  
An investigation of the current trends in usage of social-networking sites, safety strategies for social networking, and the positive uses of these activities

## Scope – Grade 8 continued – Online Personal Safety>Sub-Topic: Web 2.0 Technologies

- **Your Digital Footprint** (*multi-grade 6 – 8*)  
Defines the term “digital footprint: and enables understanding of how online actions impact searchable personal information.

### >Sub-topic: Internet Safety Review Concepts with Math Activities

- **Introduction to Graphs** (*multi-grade 5 – 8*)  
**Graphing** (*multi-grade 5 – 8*)
- **Survey and Statistics** (*multi-grade 6 – 8*)
- **Word Problems and Algebraic Equations** (*multi-grade 6 – 8*)

### Module: Cyber Predator Identification

- **Grooming Process Awareness** (*multi-grade 7-8*)  
Learners develop a basic understanding of a cyber predator’s grooming process.
- **Online Predators and the Grooming Process**  
PowerPoint facilitated lesson age-appropriately helps students learn to identify and comprehend basic components of an online predator’s grooming process.
- **Avoiding Online Predators** (*multi-grade 6-8*)  
PowerPoint facilitated lesson helps students learn to identify risky behaviors related to involvement with online predators.
- **Examining “Willing Participation”** (*multi-grade 7-8*)  
Develops understanding of the safety risks posed by pursuing inappropriate online relationships
- **WORKBOOK: In Sync with Internet Safety Series: A Common Sense Guide to Strangers Online** (*multi-grade 6– 8*) **For purchase only** – covers the topic of cyber predators in a workbook format. Includes teachers' guide

### Module: Cyber Security

- **UNIT: Cyber Security (5 lessons)**  
Comprehensively covers security-related e-mail protocols and the risks of spyware and spam scams
- **Spyware Risks** (*multi-grade 7 – 8*)  
Individual lesson develops understanding of the online security issues presented by spyware.
- **Virus Recognition and Action** (*multi-grade 7 – 8*)  
Individual lesson develops understanding of how to prevent online security issues presented by malware.
- **National Student Watch** (*multi-grade 6 – 8*)  
Learners develop a comprehensive understanding of their school's action or disaster plan in response to homeland security threats, and the means of relaying information concerning threats.
- **Homeland Security** (*multi-grade 7 – 8*)  
Learners learn terminology and concepts related to potential national security threats facilitated by the Internet.

### Module: Intellectual Property

- **UNIT: Intellectual Property (6 lessons)**  
Lessons focusing on the various aspects of proper and improper online intellectual property usage
- **UNIT: i-Creatm (20 lessons/activities PLUS workbook)** (*multi-grade middle school*)  
Comprehensively covers concepts related to patents, trademarks and copyrights
- **File Sharing P2P**  
Individual lesson investigates the legal and security issues surrounding peer-to-peer networks

### Module: Effective Outreach

#### Sub-Topic: Review Concepts with Literacy Activities

- **Integrated Literacy Review: Internet Safety Focus – Personal Information**  
Enables review and reinforcement of online personal safety concepts through basic language arts activities.

#### Sub-Topic: Service Learning

##### **UNIT: Service Learning (8 lessons)**

Lessons use i-SAFE Outreach materials to engage students in Internet safety-related service learning

### Module: Media Literacy

- **UNIT 1 – Introduction to Media Literacy (4 lessons)**  
Not just about the Internet! First in a series, this unit provides a complete introduction to media literacy.



# i-SAFE CURRICULUM SCOPE 2008-09 (High School)

## Non-Webcast Lessons

### Module: Cyber Community Issues

- **Cyber Community Survey**  
A survey is used to illustrate the Internet community in comparison to the physical community with a focus on the similarities and differences and appropriate versus inappropriate online interactions.
- **Online Freedoms and the Culture of the Internet**  
An investigation of Internet-related laws in the United States and how other countries compare
- **Legal Trends in Internet Safety and Security**  
A look at current legal trends concerning the Internet
- **Safe Website Design**  
Learners develop a comprehensive understanding of safety tips to remember when designing and building their own Websites.
- **Negative Networking: Terrorists, Gangs and Cults**  
An investigation of how terrorists, gangs and cults are permeating Cyberspace
- **Emerging Leaders: Cyber Citizens**  
An examination of how online issues affect leadership by cyber citizens.
- **Acceptable Use Policies as a Teaching Tool Unit**  
Educators are provided with comprehensive guidelines, including age-appropriate lessons and activities, on the use of the school's acceptable use policy (AUP) as a teaching tool.
- **WORKBOOK: Internet Life Skills Series 3 (4 lessons)**  
*For purchase only* – Workbook topics enable completion in a self-guided manner. Series 3 includes: Online Search Skills, Online Job Hunting, Money Management with Technology, and Income Tax Online

### Module: Online Personal Safety

- **Online Privacy**  
A closer look at how one willingly submits private information online; a guide to raise awareness
- **Online Shopping Risks**  
An examination of how to shop safely online and evaluate shopping Web sites
- **Safety in Online Gaming**  
An examination of the terms and concepts related to safety challenges in online gaming
- **Safety in Online Gambling**  
An examination of the legalities and safety challenges in online gambling

#### >Sub-Topic: Cyber Bullying

- **Cyber Bullying and Cell Phone Harassment**  
Provides information and prevention strategies to avoid cell phone harassment

#### >Sub-Topic: Web 2.0 Technologies

- **A Web 2.0 World**  
Learners explore the risks and benefits of interactive technologies described as "Web 2.0."
- **Your Digital Footprint**  
Defines the term "digital footprint" and enables understanding of how online actions impact searchable personal information.
- **Social-Networking Risks**  
An investigation of the current trends in usage of social-networking sites, safety strategies for social networking, and the positive uses of these activities
- **Online Social Networking**  
Develops concepts related to strategies for safe social networking
- **WORKBOOK: Life Skills Series 2 (5 lessons)**  
*For purchase only* – Workbook topics enable completion in a self-guided manner. Series 2 includes: Your Online Persona, Online Social Networking, Online Relationships, Multi-user Online Gaming, Peer-to-Peer Networking

### Module: Cyber Predator Identification

- **Online Relationships**  
Learners develop a basic understanding of how online relationships can be potentially harmful.

### **Module: Cyber Security**

- **Malware Protection**  
Comprehensive examination of the dangers of malware and proactive protection strategies
- **Phishing and Pharming Schemes**  
Defines and explores how phishing and pharming schemes target people's personal information
- **Homeland Security**  
Learners learn terminology and concepts related to potential national security threats facilitated by the Internet.
- **WORKBOOK: Life Skills Series 1 (4 lessons)**  
*For purchase only* – Workbook topics enable completion in a self-guided manner. Series 1 includes: Computer Security, Online Banking, Online Research Skills, online Shopping

### **Module: Intellectual Property**

- **UNIT: Music Rules – Learn Before You Burn (6 lessons)**  
Lessons focusing on Intellectual property usage as it applies to music
- **UNIT: i-Creatm (17 lessons/activities PLUS workbook) (high school level)**  
Comprehensively covers concepts related to patents, trademarks and copyrights
- **Cyber Ethics and Peer-to-peer Networks**  
Individual lesson investigates the legal and ethical issues surrounding peer-to-peer networks
- **Copyright and Fair Use**  
Individual lesson teaches students about copyright, fair use and how to properly cite a source

### **Module: Effective Outreach**

- **i-Adopt-A-School Certified Mentors Curriculum**  
Guide and lesson plans to enable high school students to teach internet safety to younger students;  
Available to student mentors who register and submit an online Implementation Plan at [www.isafe.org](http://www.isafe.org)

### **Sub-Topic: Service Learning**

- **UNIT: Service Learning (8 lessons)**  
Lessons use i-SAFE Outreach materials to engage students in Internet safety-related service learning

### **Module: Media Literacy**

- **UNIT 1 – Introduction to Media Literacy (4 lessons)**  
Not just about the Internet! First in a series, this unit provides a complete introduction to media literacy.

## **Webcast Lessons**

- **Cyber Citizenship Webcast and Lesson Plan**  
An investigation of citizenship issues presented by Internet use, focusing on hacking and hactivism, steganography, potentials of terrorist use of the Internet, and associated legal consequences
- **Privacy and the Internet Webcast and Lesson Plan**  
An Introduction to safety online focusing on personal information, online privacy, and various forms of online communication
- **Social Issues Webcast and Lesson Plan**  
Developed around a collection of student-produced videos on Internet social issues, including the grooming process, online identities, and online relationships
- **Pornography on the Web Webcast and Lesson Plan**  
Developed around the winning high-school entry in the Student Filmmaker Contest; presents the problems associated with the ease of access to pornography on the Internet.
- **Cyber Harassment: Online Bullying and Stalking Webcast and Lesson Plan**  
This investigation of cyber-harassment issues focuses on definitions of bullying and stalking as they apply to the Internet, rules, laws, and consequences, and the Ryan Halligan story.
- **Cyber Relationships Webcast and Lesson Plan**  
Explores the concept of willing participation in online relationships with strangers and the roles that predators play
- **Security: Malicious Code Webcast and Lesson Plan**  
An investigation of Internet security issues, consequences, and computer security strategies relevant to the spread of malicious code
- **Intellectual Property Webcast and Lesson Plan**  
Identifies appropriate use of the Internet and intellectual property by covering the definition of "intellectual property," related key terminology, rules, laws, and consequences